

KING COUNTY INTERNATIONAL AIRPORT - RECABLING OF TAXIWAY ALPHA LIGHTING SYSTEM

Contract C33080C

Volume 1 of 1

**Bidding Requirements and Forms
General Terms and Conditions
Technical Specifications
Contract Drawings**

May, 2003



King County

**Department of Transportation
Airport Division**

MFR
Contacted Rich
Kendall Oct 8, 2003
Closeout should be
complete Feb 2004,
he will then fwd all
docs to me.
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**King County International Airport Recabling Taxiway Alpha Lighting System
Summary of Work****PART 1 GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Terms and Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Project consists of Recabling the Taxiway Alpha lighting system at the King County International Airport (KCIA).

This project consists of removing the existing electrical cabling and installing new cabling and transformers for the Taxiway Alpha lighting system. The Taxiway lighting system powers the taxiway lights, guidance signs, and wind sock lights. King County International Airport (KCIA) will provide the replacement cable, transformers and the field splice connector kits. The Contractor must remove and dispose of the existing cable, install the new cable into the existing ducts, install the transformers (provided by the Airport), install connectors, connect the transformers, reinstall lights and perform testing of the system. The project will require removing and install about 49,600 ft of cable, perform about 730 field splices of connections, and install about 325 transformers.

Work can only be conducted when there are Visual Flight Conditions. The taxiway lighting system will be de-energized at the beginning of each work day and must be re-energized at the end of each work day. In addition some of the work is within the Runway Safety Area and must be performed only when the Runway is closed to operations.

- B. Project Representative and/or Owner, or designated representative:

Rick Renaud, Senior Engineer
King County International Airport
7233 Perimeter Rd. S.
P.O. Box 80245
Seattle, WA 98108
(206) 296-7427

**King County International Airport Recabling Taxiway Alpha Lighting System
Summary of Work**

Airport Compliance and Safety Officer:

Jamie Runyan
King County International Airport
7233 Perimeter Rd. S.
P.O. Box 80245
Seattle, WA 98108
(206) 296-7428

1.3 CONTRACT TIME

- A. The Work of this Contract shall be commenced immediately upon the effective date established in the written Notice to Proceed. The work shall be substantially complete, as defined in the General Terms and Conditions of the Contract within 60 consecutive calendar days from the effective date of the Notice to Proceed.
- B. Contract Time may be changed only by amendment to the Contract, signed by both parties.

1.4 LIQUIDATED DAMAGES

- A. For each calendar day after the date fixed for substantial completion of the Contract that the work remains uncompleted, the Contractor shall pay the Owner the Sum of \$1,000 dollars per day as fixed, agreed, liquidated damages, but not as a penalty.
- B. Liquidated damage shall not be assessed when the delay in completion of the Work is due to an act of Force Majeure.

END OF SECTION

SECTION 01016
EXISTING UTILITIES

PART 1 GENERAL

1.01 EXISTING UTILITIES

- A. In general, the locations of existing major utilities, whether aboveground or underground, are indicated on will be provided to the Contractor. This information has been obtained from utility maps and field surveys. The County does not guarantee the accuracy or completeness of this information, and it is to be understood that other aboveground or underground facilities not shown on the Drawings may be encountered during the course of the work. The County does not guarantee that the electrical ducts or conduits, lights, light cans, junction boxes and handholds are clean and clear, and may require the Contractor to take measures to decant or clean the required structures prior to the required installations. Any additional time needed to decanting stormwater or cleaning required structures shall not be considered a delay or a basis for additional compensation.
- B. Existing utilities, whether shown on the Drawings or not, shall be protected and maintained, relocated, rerouted, removed and restored as may be necessary by the Contractor in a manner satisfactory to owners and operators of the utilities and to the Airport in accordance with the provisions of these Contract Documents.

1.02 MARKING EXISTING UTILITIES

- A. The Contractor shall arrange with the owners and operators of the respective utility systems to mark the locations, and if necessary, to expose the existing utilities prior to construction of the facilities contained in this Contract. If, as a result of the work, it is found necessary to repair the facilities of publicly or privately-owned utilities, said relocations, repairs, or revisions shall be accomplished at the Contractor's expense by employees of those respective utilities and services.

1.03 CONSTRUCTION NOTIFICATION

- A. The Contractor shall cooperate with the utility owners and allow them reasonable opportunity for the introduction and storage of their materials and tools at the project site and for the execution of their work, and shall keep them informed of all construction schedules and coordinate the timing of the project so that final completion and acceptance dates may be met. Access to the utilities shall be maintained at all times.
- B. It shall be the responsibility of the Contractor to call the King County "One-Call" system, 1-800-424-5555, and verify the correct locations so as to avoid damage or disturbance. The Contractor shall be responsible to locate ALL underground utilities regardless of whether they are members of the "One-Call" system.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

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**King County International Airport Recabling Taxiway Alpha Lighting System
Permits**

SECTION 01062

PERMITS

PART 1 GENERAL

1.01 PERMITS

- A. The Contractor shall be responsible to obtain all trade permits.
- B. Comply with applicable terms and conditions contained in such permits. It shall be the Contractor's responsibility to coordinate and schedule, with proper advance notice, all inspections required by the permitting agency and obtain permitting agency sign off. Submit original signed off permits to the Project Representative within 5 days of final inspection by the permitting agency.

1.02 POSTING PERMITS

- A. Post all permits at the site of the work.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

**King County International Airport Recabling Taxiway Alpha Lighting System
Health and Safety**

SECTION 01063

HEALTH AND SAFETY

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies regulatory requirements applicable to this project that shall include, but shall not be necessarily limited to, the Department of Labor and Industries, Washington State Department of Transportation, FAA and King County regulations.

1.02 SAFETY AND HEALTH REGULATIONS

- A. Applicable standards and regulations:
1. Comply with Safety and Health Standards for Construction, promulgated by the Director of the Department of Labor and Industries under Section 49.17.050 of the Washington Industrial Safety and Health Act of 1973, as set forth in Chapter 49.17 Revised Code of Washington (RCW).
 2. Comply with Safety and Health Regulations for Construction, promulgated by the Secretary of Labor under Section 107 of the Contract Work Hours and Safety Standards Act, as set forth in Title 29, C.F.R.
 3. Comply with the provisions of the Federal Occupational Safety and Health Act, as amended.
 4. Comply with FAA Standards.
- B. Personal protection: The Contractor, its supervisors, subcontractors and suppliers are advised to become familiar with the precautions necessary to prevent accidents arising from hazards which might be present during the course of the work.

1.03 HEALTH AND SAFETY SUPERVISOR

- A. Provide on site, a qualified health and safety supervisor, with responsibility and full authority to coordinate, implement and enforce the Contractor's accident prevention program for the duration of this Contract. The name and telephone number of the safety supervisor shall appear in the accident prevention program.

1.04 AIRPORT SAFETY PROVISIONS

- A. All signs, barricades, traffic cones, flags, flagmen, lights or markings as may be necessary to protect traffic and the work in progress will be provided, installed, and maintained by the Contractor. It shall remain the sole responsibility of the Contractor to insure that all safety provisions necessary to protect traffic while the work is in progress, be carried out during the period of construction. Close cooperation and coordination will be required of the Contractor with the Airport and the operating representatives of the Airport to insure that all safety precautions are carried out. All barricades utilized on the airside of the Airport must comply with FAA standards.
- B. The Airport will identify a representative who is responsible for airport safety, communications and coordination. The Contractor shall be responsible for contacting the Airport's Safety Representative daily to coordinate operations and safety procedures.
- C. The Contractor shall comply with all safety rules and regulations required by the Airport's Safety Representative during the construction period.
- D. The Contractor shall strictly adhere to the use of the haul routes that are shown in the Plans or as may be agreed upon at the preconstruction conference.
- E. The Contractor shall remove any materials or debris from the active runways, taxiways, aprons and roadways in prompt manner as they may be deposited as a result of the construction of this project. The Contractor shall be required to take immediate steps to remove this debris if in the opinion of the

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King County International Airport Recabling Taxiway Alpha Lighting System Health and Safety

Airport the debris represents a hazardous condition. At the end of each working day, the Contractor shall inspect the work site to be sure that all warning devices, signs, and barricades are properly installed and working and that the active runways, taxiways, aprons and roadways affected by this project are clean and free of debris.

- F. The Contractor shall follow instructions and directions provided by the Airport's Safety Representative regarding surface deformities such as, but not limited to, open excavations, holes, pavement ridges and lips measuring over 3-inches in safety areas and no more than one inch on operational surfaces.
- G. Aircraft shall have the right of way under all circumstances.
- H. The Contractor shall be fully responsible for damage to runways, taxiways, aprons, roadways, and shall repair same at his own expense to the satisfaction of the Airport.
- I. The Airport has an Identification Badge program for all persons in the Air Movement Areas of the Airport (those areas where aircraft maneuver). All of the Contractor's personnel shall have these ID badges displayed on them while working in these Air Movement Areas. Certain foreman and flagging personnel will also have to receive the Airport's ramp certification training.
- J. The Contractor shall be responsible to periodically throughout the workday and at the end of the workday inspect the work sites and correct any safety and cleanliness problems to the satisfaction of the Airport. This requirement is especially critical for work done in the Air Movement Areas

1.05 CONTRACTOR'S SAFETY PLAN

- A. The Contractor may be required to prepare and submit to the Airport a written Safety Plan demonstrating the methods by which all applicable safety requirements of the Contract will be met. The Airport's review of such a plan shall not be deemed to constitute approval or acceptance thereof.

1.07 UTILITIES AND OTHER DANGEROUS SUBSTANCES

- A. the Contractor must take appropriate precautions in working near or with utilities and dangerous substances during the performance of work in order to protect the health and safety of the worker, the public, property and the environment.
- B. Such utilities and dangerous substances include, but are not necessarily limited to:
 - 1. Conductors of:
 - a. Petroleum products.
 - b. Toxic or flammable gas.
 - 2. Natural gas pipelines operating at pressures greater than 60 pounds per square inch.
 - 3. Electric conductors without concentric neutral conductors or other grounded metal shields or sheaths, either exposed or directly buried, or in duct or conduit.
 - 4. Electric conductors with potential to ground of more than 300 volts.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

**King County International Airport - Recabling Taxiway Alpha Lighting System
Reference Standards**

SECTION 01090

REFERENCE STANDARDS

PART 1 GENERAL

1.01 QUALITY ASSURANCE

- A. For products or workmanship specified by association, trade, or federal standards, comply with requirements of the standard, except when more rigid requirements are required by applicable codes or specified herein.
- B. Comply with issue of reference standard which is current at date of receipt of bids.
- C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in a reference document.

1.02 SCHEDULE OF REFERENCES

AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W., Suite 249 Washington, DC 20001
ACI	American Concrete Institute P.O. Box 19150 Detroit, MI 48219
ANSI	American National Standards Institute, Inc. 111 W. 42nd St., 13th Floor New York, NY 10036
ASCE	American Society of Civil Engineers 1015 - 15th Street NW, Ste. 600 Washington, DC 20005
CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Road Schaumburg, IL 60173
EPA	United States Environmental Protection Agency 1200 Sixth Avenue Seattle, WA 98101
FAA	Federal Aviation Administration 800 Independence Avenue SW Washington, DC 20591
OSHA	Occupational Safety and Health Act U.S. Department of Labor Occupational and Health Administration 1111 Third Avenue, Ste. 715 Seattle, WA 98101-3212

**King County International Airport - Recabling Taxiway Alpha Lighting System
Reference Standards**

UBC	Uniform Building Code Published by ICBO 5360 South Workman Mill Road Whittier, CA 90601
WAC	Washington Administrative Code Washington State Secretary of State Olympia, WA 98504
WSHA	Washington Industrial Safety and Health Act Department of Labor and Industries 300 West Harrison Street, Room 301 Seattle, WA 98119
KCRS	King County Road Standards - 1993 King County Department of Public Works Seattle, WA.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Terms and Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of site beyond areas in which the Work is indicated.

1. Limits: Confine construction operations as shown on the drawings. In those locations where existing vegetation or facilities are to remain, the Contractor must work around the material.
2. Owner and Airport Tenants Occupancy: Allow for Owner and Airport Tenants occupancy of site and use by the public.
3. Driveways and Entrances: Keep driveways and entrances serving premises available to the Owner, Airport Tenants, Owner's employees, and emergency vehicles at all times, unless arrangements have been made with the Owner or the effected tenant. At the end of the day, all open excavations or trenches within driveways or entrances must be backfilled and patched, or covered with plates or cold patch.
4. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
5. Coordinate use of premises under the direction of the Owner.
6. Move any stored products, under Contractor's control, that interfere with the operations of the Owner or Airport Tenants.

1.3 NOT USED

1.4 WORK HOURS

- A. Work accomplished during work hours listed below:

1. Regular Daytime Work Hours: 6:30 AM to 4:30 p.m., Monday through Friday.

1.5 CONSTRUCTION PHASING/SCHEDULING

- A. Construction Scheduling:

**King County International Airport Recabling
Taxiway Alpha Lighting System****Work Restrictions**

1. The Contractor shall schedule construction and coordinate his work with use of existing spaces in accordance with the following:
 - a. The taxiway lighting system will be de-energized at the beginning of each of the Regular Daytime Work Hours. The lighting systems must be fully operational prior to 4:30 p.m. Work with in the Runway Safety Areas may need to be scheduled outside of the Regular Daytime Work Hours to minimize the interruptions to the Airport operations.
 - b.
 - c. A unit price for premium time payment will be made for each day work is performed outside of the Regular Daytime Work Hours. For the purposes of this Section, a day must be 4 or more continuous hours worked outside of the Regular Daytime Work Hours.
 - d. The Contractor must provide to the Project Representative, the proposed work schedule for the next week no later than Wednesday of the preceding week. Any proposed interruptions to Airport operations must be requested 7 days prior to the proposed interruption. The Airport Manager must approve any interruptions to the Airport's operations. The Airport Manger will approve, deny conditionally approve the proposed interruptions with 3 working days.
2. The unit price for premium work will include all expenses and is the only compensation that will be allowed for special equipment or overtime that may be required as a result of scheduling work to accommodate the Airport's operations or for required work outside of Regular Daytime Work Hours.

END OF SECTION

**King County International Airport Recabling Taxiway Alpha Lighting System
Operational Safety On Airports****SECTION 01150****OPERATIONAL SAFETY ON AIRPORTS****PART 1 - GENERAL****1.01 SUMMARY**

- A. The King County International Airport, hereinafter referred to as KCIA, is a complex operating facility which is governed by a very strict set of operating rules to insure the safety of the traveling public and those individuals who function as support personnel to the facility. It is recognized and understood that the Contractor is required to comply with the most current requirements contained in FAA Advisory Circulars and all applicable King County Code, Rules and Regulations as they pertain to this project. It is understood and accepted by the KCIA that the Contractor has familiarized itself with general Airport operations and has taken these into consideration in arriving at its bid prices and in scheduling its various activities.
- B. The following are the general safety operations and objectives that must be achieved to maximize safety and to minimize time and economic loss to the aviation community, construction contractors and others directly or indirectly affected by the project. The Contractor shall keep these objectives in mind when formulating schedules and operational activities. The Contractor shall be responsible for controlling their operations and the operations of subcontractors (at all levels) and suppliers so as to comply with the requirements of this Section.
1. Keep the Airport operational for all users.
 2. Minimize delays to aircraft operations.
 3. Maintain safety of aircraft movement and Airport operations as a whole.
 4. Minimize delays to construction operations.
 5. Minimize Airport operation and construction activity conflicts.
 6. Maintain safety of personnel using the Airport at all times.
 7. Control of Foreign Object Debris (FOD)

**King County International Airport Recabling Taxiway Alpha Lighting System
Operational Safety On Airports**

C. Section includes:

<u>Article</u>	<u>Title</u>
1.02	Definitions
1.03	References
1.04	Related Sections
1.05	Requirements and Regulations Relating to Operation of Motor Vehicles
1.06	Requirements and Regulations Relating to Operators of Motor Vehicles
1.07	Requirements for Orientation of Contractor Personnel and Project Meetings
1.08	Security Requirements
1.09	Safety Requirements
1.10	Interruptions and Stoppages of the Work Due to Aircraft Operations and Hazardous Conditions
1.11	Requirements and Regulations Affecting the Conduct of the Work
1.12	Obstructions to Navigation
1.13	Daily Inspections
1.14	Emergency Procedures
1.15	Administrative Requirements

1.02 DEFINITIONS

- A Movement Area: The Movement Area consists of runways, taxiways and other areas of the Airport that are used for taxiing or hover taxiing, air taxiing, takeoff and landing of aircraft, exclusive of loading aprons and aircraft parking areas. This area extends

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**King County International Airport Recabling Taxiway Alpha Lighting System
Operational Safety On Airports**

outward from the Runway Centerline to the Non-Movement Area Boundary Marking. This marking consists of two yellow lines, one solid and one dashed. The solid line is located on the Non-Movement side, and the dashed yellow line is located on the Movement Area side. The dashes are 3 feet long with a 3-foot spacing between dashes.

- B Non-Movement Area: That area of the Airport Operations Area not defined as a Movement Area and including the exterior of buildings on or adjacent to the non-Movement Area. Aircraft in motion on these surfaces are not under control of the air traffic control tower. The Non-Movement Area extends outward from the Non-Movement Area Boundary Marking to the Restricted Area Boundary. Restricted Area Boundary: The Restricted Area boundary is a chain link fence or the exterior of buildings connected to Restricted Area boundary fence. This boundary marks the area within which positive, photographic identification is required to be visibly displayed above the waist by any person within this area, and vehicles are required to visibly display company identification.
- C Apron: That non-Movement Area for the positioning or parking of aircraft during ground operations not involving landing and takeoff of airplanes. The areas are usually designed according to use, such as terminal, cargo, parking, service hangar, or holding apron. Such terms as "ramp," "hardstand," "turnaround," etc., are synonymous with apron. Apron areas are located between and the Restricted Area Boundary. Other sub-area designations are:
- D Aircraft Parking Positions - used for parking aircraft to enplane and deplane passengers, load or unload cargo.
- E Aircraft Service Area - on or adjacent to an aircraft parking position. They are used by airline personnel and equipment for servicing aircraft and staging of baggage, freight and mail for loading and unloading of aircraft.
- F Aircraft Taxilanes - reserved to provide taxiing aircraft with access to and from parking positions.
- G Runway: A clearly defined area on the Airport that has been prepared and is suitable for landing and takeoff of airplanes. The principal runway elements include the structural pavement, shoulders, blast pads, runway safety area, extended runway safety area and Airport imaginary surfaces. The runway drainage system, lighting, marking and areas required for landing aids are also integral design parts of the runway.
- H Taxiway: A defined path over which airplanes can taxi from one part of an Airport to another. It includes the structural pavement, shoulder, taxiway safety area and obstacle-free area.

**King County International Airport Recabling Taxiway Alpha Lighting System
Operational Safety On Airports**

- I Vehicle Drive Lanes: Identified lanes in the non-Movement Area designated for vehicular movement on the Movement Area. Drive lanes are delineated by white lines or traffic markings painted on the pavement.
- J Terminal Buildings and Support Facilities: Interior of terminal and concourses, and support facilities such as cargo buildings (including exterior of buildings and roofs), which are inside the Movement Area.
- K Street-Side of Buildings: Exterior of building and roof on street side, outside of the Movement Area, streets, multilanes, drives, parking garage and remote parking lots. This area is also referred to as the landside of the Airport.
- L Foreign Object Debris (FOD): Any object capable of being ingested into aircraft engines or penetrating aircraft tires. Examples are knives, forks, spoons, hand tools, bolts, nails, nuts, cable, polyurethane, vehicle parts, sand, gravel, paper, rocks, dirt, cans, glass, wood, et al.
- M Unsuitable Weather: Atmospheric or environmental conditions which restrict construction activities and effect operation of aircraft while approaching a runway to land; during landing; taxiing between runways, ramps, aprons, hangars, or loading zones; standing by to takeoff; or during takeoff as determined by the Airport Manager or his/her authorized representative. In addition, that atmospheric or environmental condition which may, in the opinion of the Project Representative, affect the final outcome, position, or condition of construction work, maintenance work, or improvement of any sort or nature.
- N Jet Blast: Jet blast is the force of jet exhaust produced by the aircraft engines. The high velocities produced by aircraft engines are capable of causing bodily injury and damage to equipment. The drag and uplift forces produced by jet engines are capable of moving large boulders.
- ☐ O Safety Areas: An identified surface surrounding the runway and taxiways prepared and suitable for reducing the risk of damage to airplanes unintentionally departing the runway or taxiway.
- P Approved KCIA Escort: An equipment or personnel when with in the designated taxiway or runway safety areas are required to have an escort by an approved and designated by the KCIA. The escort will be in radio communication with the control tower and will specify the movement and parking of equipment and personnel within the defined safety areas.

1.03 REFERENCES

**King County International Airport Recabling Taxiway Alpha Lighting System
Operational Safety On Airports**

The rules, requirements and regulations specified in this section have been compiled from the following sources.

- A. King County International Airport Code.
- B. Federal Aviation Administration Advisory Circulars
- C. Federal Aviation Regulations (FAR) Part 77.
- D. FAA Order NM 5200.3.

**1.04 REQUIREMENTS AND REGULATIONS RELATING TO THE OPERATION OF
MOTOR VEHICLES****A. General:**

- 1. During the term of this Contract, the Contractor shall recognize and abide by the following rules and controls as they may be modified by federal regulations.
- 2. In addition to these regulations, the Project Representative is empowered to issue instructions deemed necessary for the safe operations of the Airport.

B. Operation of Motor Vehicles:**1. General:**

- a. Motor vehicle operations within and on the Airport premises shall be governed generally by the provisions of the Washington State Motor Vehicle Codes and Traffic Direction procedures and signals for turns, lights and safe-driving precaution shall be in conformity therewith. In addition, motor vehicles shall conform to all special regulations prescribed by the Airport.
- b. Traffic on perimeter roads, vehicle drive lanes, public thoroughfares and parking areas of the Airport is limited to those vehicles properly licensed to operate on public streets and highways.
- c. All vehicular equipment in the Movement Area, cargo, access road, aircraft parking or storage areas shall at all times comply with any lawful signal or direction of KCIA employees. All traffic signs, lights and signals shall be obeyed, unless otherwise directed by KCIA employees.

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Operational Safety On Airports**

- d. Every person operating motorized equipment of any character on any area shall operate the same in a careful and prudent manner and at a rate of speed posted or fixed by this section and at no time greater than is reasonable and proper under the conditions existing at the point of operation, taking into account traffic and road conditions, view obstructions and consistent with all conditions so as not to endanger the life, limb, or property or the rights of others entitled to the use thereof.
2. Operation of Vehicles Within Movement Area:
- a. All motor vehicles that enter the Movement Area shall possess exhaust systems which are protected with screens, mufflers, or other devices adequate to prevent the escape of sparks or the propagation of flame.
 - b. All vehicles (powered and non-powered) within Movement Area shall be equipped with reflectors or lights on both front and rear ends and on the sides.
 - c. All Contractor vehicles shall be equipped with one of the following visibility/identification features which shall remain in continuous use whenever located within the Air Operations Area:
 - 1) Operable yellow flashing beacons. Beacons must be lighted during all periods of vehicle operation. Beacons are to be mounted on vehicles so as to be visible 360 degrees around the vehicle at ground level from a distance of 20 feet to a distance of at least 5,000 feet in daylight conditions at mid-day, or as approved in writing by the KCIA Safety Officer.
 - 2) 3 foot by 3 foot flags having a checkered pattern of international orange and white squares at least 1 foot on each side (For fabric color specifications see FAA Advisory Circular 150/5210-5B, Appendix 1.). Attach flag on top of vehicle with rigid pole so that flag will be visible at all times.
 - 3) Vehicles without beacons/flags will not be permitted to enter the Air Operations Area.
 - d. No person shall operate any motor vehicle or motorized equipment in the Movement Area of the Airport unless such motor vehicle or motorized equipment is in a safe and mechanically reliable condition for such operation.

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Operational Safety On Airports**

- e. Any person operating equipment in the Movement Area shall, in addition to this section, abide by all existing Federal Aviation Administration and other governmental rules and regulations.
- f. No person shall operate any motor vehicle or motorized equipment on the aircraft movement or non-Movement Areas of the Airport at a speed in excess of fifteen (15) miles [32 km/h] per hour, or the posted speed limit, whichever is lower, less where conditions warrant. Designated motor vehicle drive lanes shall be utilized where provided unless specific authorization to the contrary is given by the Project Representative.
- g. No person operating a motor vehicle or motorized equipment in the Movement Area shall in any way hinder, stop, slow, or otherwise interfere with the operation of any aircraft on the Airport.
- h. All aircraft and emergency vehicles have priority over the Contractor's vehicles. Contractor's vehicles shall yield right of way to aircraft and emergency vehicles. The Contractor shall ensure that under no circumstances will any contractor or subcontractor or other vehicle associated with the job pass beneath any part of an aircraft or loading bridge, or block the access to any parking gate or delay any aircraft movement.
- i. Contractor vehicles shall not deviate from approved haul routes as directed by the Project Representative. No crossover between construction sites is permitted.
- j. Escorts: At all times during work within runway or taxiway safety areas (250 feet of the centerline of an operating runway or 160 feet of the centerline of an operating taxiway); or when entering the Movement Area, vehicles shall be accompanied by an approved KCIA escort vehicle. All requests for escorts and operations within the Aircraft Movement Area, shall be approved by the Project Representative. On the Wednesday prior to the next workweek the Contractor must provide to the Project Representative the proposed work schedule and the escort schedule required to support the proposed work schedule.

C. Parking:

- 1. No parking is permitted on any Airport roadway as the primary purpose of the Airport roadways is for motor vehicle traffic.

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Operational Safety On Airports**

2. No person shall park any motor vehicle, other equipment, or materials in the Movement Area of the Airport, except in a neat and orderly manner and at such points as prescribed by Project Representative.
3. No person shall park any motor vehicle or other equipment or materials in the Movement Area of the Airport within fifteen (15) feet of any fire hydrant or standpipe.
4. Under no circumstances will vehicles or equipment be parked within five (5) feet of the Airport Perimeter Security fence line.

D. Impoundment of Motor Vehicles:

1. Any vehicle in violation of the provisions as referenced in Chapter 46.52 (Abandoned Vehicles) or Chapter 46.61 (Rules of the Road) of the Revised Code of Washington may be subject to impoundment pursuant to the provisions and procedures contained therein.
2. No vehicle shall be impounded except under the direction of an authorized police officer of the KCIA Police.

E. Vehicle Identification:

1. All vehicular equipment operating within the Movement Area must display signs of commercial design on both sides of the vehicle to identify the vehicle as belonging to the Contractor firm. The Contractor's name must appear in letters a minimum of two inches high. Magnetic signs are acceptable.
2. Vehicles that appear at access gates without signs on both sides of the vehicle will be denied access. Vehicles found to be missing signs within the Movement Area will be escorted off the job site and not be permitted to re-enter until signs have been installed.

- F. Load Limits:** Unless otherwise indicated, when using Airport roadways, the Contractor shall restrict the gross combination weight to the legal limits allowed on public roads.

1.05 REQUIREMENTS AND REGULATIONS RELATING TO OPERATORS OF VEHICLES

- A.** All drivers operating vehicles on Airport property must carry a valid United States driver's license on his/her person, appropriately endorsed for the type of equipment being operated. If employed by a Washington State company, the driver must have and carry a valid State of Washington driver's license on his/her person.

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- B. All personnel (including drivers) working within the Movement Area must have a KCIA Identification Badge.
- C. Drivers designated to operate vehicles in the Movement Area shall receive special drivers training and be approved by the KCIA before being allowed to operate within the Movement Area or must be escorted by KCIA approved escort. Drivers operating outside the Movement Area may operate vehicles without attending the special drivers training course.

**1.06 REQUIREMENTS FOR ORIENTATION OF CONTRACTOR PERSONNEL AND
PROJECT MEETINGS****A. Air Operations Orientation:**

- 1. After Award of the contract has been issued, but prior to the Notice to Proceed, arrange with the Project Representative to have all supervisory and job office personnel assigned to this project attend an "Air Operations Orientation." This orientation will be conducted by KCIA for discussion of the rules and regulations pertinent to this Contract. The orientation will be repeated at reasonable intervals during the construction period. KCIA attendees will include the Project Representative and Airport Manager's authorized representative.
- 2. At least one (1) first-line supervisor who has attended the orientation shall be present in the vicinity of the active runways and taxiways when construction activities require personnel or equipment in these areas. The Contractor and Project Representative shall keep a record of the individuals who have attended the orientations. Contractor employees who have not attended the Airport Operations Orientation will not be permitted to work within the aircraft Movement Area.

- B. The Air Operations Orientation may be conducted as part of the preconstruction meeting and shall not be considered an educational course in Air Operations Safety, but a discussion of existing rules or regulations related to Airport activities. The Contractor shall be completely responsible and liable for the actions of his employees, agents, or representatives.
- C. **Safety and Security Meetings:** An Airport safety and security meeting maybe required and conducted after the award of the contract and prior to commencing construction. Additional construction safety meetings will be scheduled throughout the life of the contract.

1.07 SECURITY REQUIREMENTS

The Contractor shall comply with all security requirements specified herein.

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- A. Identification Badging: All Contractor personnel working on the proposal shall have KCIA-issued identification/access badges.
- B. Perimeter Fence Security:
 - 1. Do not open gates or remove fencing without approval of the Project Representative. Adequate precautions shall be taken to prevent entrance of unauthorized persons to Airport-restricted areas or inadvertent entry of dogs or large animals into the Movement Area.
 - 2. Prior to securing work each evening, ensure that all access gates that have been opened are closed and locked and that perimeter fencing is restored to a condition that will maintain present security standards.
 - 3. Five Foot Rule: No Contractor will be permitted to store materials, park equipment or erect permanent or semi-permanent structures within five (5) feet of either side of the perimeter security fence.
 - 4. Use of Gates: Access to the worksites will be limited to only the gates approved by the Project Representative. Use of the gates shown for continuous access (in excess of twice per work shift) may at the Project Representatives discretion be require that the gate be manned by a gate guard provided by the Contractor. The Contractor shall schedule with the Project Representative a minimum of 24 hours prior to requiring continuous access through a gate.
 - 5. Any Contractor vehicles shall not allow any other vehicle to pass through a gate behind a contractor's vehicle.

1.09 SAFETY REQUIREMENTS

In addition to the requirements specified in other sections, the following Safety Requirements shall also apply to the Contractor's activities:

- A. Traffic Control: The Contractor shall furnish all required traffic control to protect the public. The actions, equipment and position of flagmen, when required, shall be the sole responsibility of the Contractor. The Contractor shall provide flagmen and construction traffic control on public facilities in accordance local jurisdiction requirements and the current edition of the Manual of Uniform Traffic Control Devices (MUTCD).
- B. In the event an employee of the Contractor violates a safety provision, they shall be prohibited from returning to work on the Movement Area without first attending another Airport Safety Orientation class and approval of the Project Representative,. Subsequent violations will be deemed as just and sufficient

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cause to demand the employee be permanently removed from the job site. The Contractor shall be responsible for all costs and delays caused by safety violation.

- C. **Contractor's Designated Representative:** The Contractor shall inform its supervisors and workmen of the Airport operations that are inherent to this Airport, as well as the safety requirements and security regulations of the Airport. The Contractor shall conduct its construction activities to conform to both routine and emergency requirements. During the course of construction, the Contractor shall designate a responsible representative who will be personally available on a 24-hour basis. The Contractor shall advise the Project Representative of the representative's name and telephone number (the telephone shall not be connected to an answering machine). The Contractor shall comply with all current safety laws, ordinances and regulations as they may apply to this contract.

**1.10 INTERRUPTIONS AND STOPPAGES OF THE WORK DUE TO AIRCRAFT
OPERATIONS AND HAZARDOUS CONDITIONS**

A. Work Stoppages:

1. Construction may be stopped by the Airport Manager, any time the former considers that the intent of the regulations regarding safety or Security Requirements are being violated or that a hazardous condition exists. This decision to suspend the operation will be final and will only be rescinded when satisfied that the Contractor has taken action to correct the condition and prevent recurrence.
2. Frequent inspections will be made by Project Representative or the Airports Safety Officer during throughout the progress of the work to insure that the Contractor is following the recommended safety procedures. The representative shall report any violations or potential safety hazards to the Project Representative who will in turn advise the Contractor of the concern for immediate correction by the Contractor.
3. Construction may also be stopped or suspended by Airport Operations through the Project Representative during periods of extremely inclement weather, such as low visibility, snow or ice accumulation, or when it is necessary to provide an extra margin of safety to aircraft operations due to other unsuitable conditions, or reduce other activities in favor of conducting snow removal operations required to keep the Airport operational.

B. Intermittent Construction Operations:

1. When directed to cease construction and move from the Movement Areas, the Contractor shall immediately respond and move all material,

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equipment and personnel as directed by the Project Representative of the Airport's Safety Officer. Operations shall not be resumed until directed from the Project Representative. Every reasonable effort will be made to cause minimum disturbance to the Contractor's operations; however, no guarantee can be made as to the extent to which disturbance can be avoided.

3. **Limitation of Operations:** The Contractor shall be responsible for controlling its operations and those of its subcontractors so as to provide for the free movement of aircraft in the apron areas of the Movement Areas.

1.11 REQUIREMENTS AND REGULATIONS AFFECTING THE CONDUCT OF THE WORK

A. General:

1. **Requirements to Begin Work:** Before starting work, the Contractor shall provide and have available all flags, signs, barricades, lights and electrical generators as may be required for the protection of air traffic, vehicular traffic and the construction work. All personnel shall have the proper identification badges and have received the required training and instruction.
2. No burning is permitted on Airport property.
3. Smoking by personnel is prohibited.
4. **Construction Activity and Aircraft Movements:**
 - a. The Contractor must first receive approval from the Project Representative prior to initiate any construction activity that would impact aircraft movement.
 - b. Construction work will not be allowed within the safety area of an open runway (250' from centerline, 1000' from threshold) or within the obstacle free area of an open taxiway without prior permission of the Project Representative.
6. **Limitation of Construction Activities:**
 - a. During construction there shall not be lips greater than 1 inch for pavement traveled by aircraft and 3 inches within the safety areas. The pavement edges shall not exceed 3 inches difference in elevation between abutting pavement sections and between full strength pavement and abutting shoulders. The Pavement shall

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have no hole exceeding 3 inches in depth nor any hole the slope of which from any point in the hole to the nearest point at the lip of the hole is 45 degrees or greater as measures from the pavement surface plane, unless, in either case, the entire area of the hole can be covered by a 5 inch diameter circle

- b. Open-flame welding or torch-cutting operations are prohibited unless adequate fire and safety precautions are provided and have been approved by the Fire Chief through the Project Representative.
- c. Open trenches, excavations and stockpiled material at the construction site shall be prominently marked with timber barricades and lights as approved by the Project Representative.
- d. Stockpiled material shall be limited in height and constrained in a manner to prevent movement resulting from aircraft blast or wind conditions.
- e. The Contractor will ensure that all lighting fixtures are shielded against interference with the vision of pilots and air traffic controllers.
- f. During non-working hours, all trenches and excavations outside of the barricaded work areas shall be backfilled or covered unless otherwise indicated in the contract documents. All covers to hand holds, junction boxes or catch basins must be returned and secured as soon as work activities are complete and at the end of the work hours.
- g. Non-working hours shall be defined as when construction is not taking place within a work area.

B. Construction Within Runways Safety Areas:

- 1. All equipment and material within Runway Safety Areas (a distance of 250 feet from the runway centerline) must be removed when the runway is being used by aircraft.
- 2. Within Runway Safety Areas and outside areas traveled by aircraft all open trenches, lips greater than one inch, and/or drop-offs greater than three inches must be filled, covered, or sloped when the runway is open.
- 3. Notification to the Airport Manager, or his/her representative, by way of the Project Representative, is required prior to beginning any construction

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within the Aircraft Movement Area. Notification of the proposed construction should be made a minimum of fourteen (14) days prior to beginning work.

C. Construction Within Taxiways Safety Areas:

1. No equipment or material within taxiway safety areas (214 feet from the taxiway centerline) shall be above the taxiway centerline grade while the taxiway is being used by aircraft unless specifically allowed in the phasing drawings.
2. Open trenches or abrupt drop-offs may be made adjacent to taxiway pavement edges only as shown in the Work Order.
3. Marking and lighting of work areas adjacent to taxiways shall be required and approved by the Project Representative.

D. Barricades and Marking of Barricades:

1. Barricades: Barricades shall be installed or relocated by the Contractor at the direction of the Project Representative whenever the need arises throughout the duration of the Contract. Timber barricades shall be placed as directed by the Project Representative to separate active areas from areas under construction. Placement of the timber barricades shall be in accordance with the Work Order and shall be approved by the Project Representative.
2. Barricade lights shall in conformance with all applicable Advisory Circulars and shall be operative at all times. It shall be the Contractor's responsibility to immediately repair or replace any light or flasher that is not operating.
3. Barricades shall be in place prior to commencing construction operations, and shall be maintained in good appearance for the life of the contract.
4. When the pinned barricades are removed for relocation or are removed from the site, the holes in the pavement shall be filled with epoxy grout and finished flush with the existing pavement to the satisfaction of the Project Representative.

- E. Closures:** No ramp, apron, taxiway, or runway area shall be closed to aircraft without approval of the Project Representative. This will enable Notices to Airmen (NOTAMS), or other advisory communications to be issued. A minimum of 72 hours notice of requested closing shall be directed to the Project

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Representative. The Project Representative will arrange inspections prior to opening any area to air traffic. Any waste material, and/or debris must be removed from aprons promptly to avoid possible damage to aircraft.

F. Debris:

1. **Debris Control:** When Airport roadways and public highways are used in connection with construction under this contract, the Contractor shall remove all debris cluttering the surfaces of such roadways. Trucks and equipment shall have all accumulated dirt, mud, rocks and debris removed before accessing the Movement Area and when leaving the work area. Loads shall be struck flush and secured to prohibit loss of material. If spillage occurs, such roadways shall be swept clean immediately after such spillage to allow for safe operation of vehicles as determined by the Project Representative. If the Contractor is negligent in cleanup and KCIA forces are required to perform the work, the expense of said cleanup shall be paid by the Contractor.
2. No loose material or waste (FOD), capable of causing damage to aircraft or capable of being ingested into jet engines may not be left in the working area on or next to runways, taxiways, ramps, or aprons. The Contractor shall direct special attention to all areas that are operational to aircraft during construction. These shall be kept clean and clear of all materials or debris at all times.
3. Food waste on a work site is a safety concern in that it attracts animals and birds that may impact the safe movement and operation of aircraft on the airfield. Food waste shall be promptly removed from construction sites.

G. Existing Airport Pavements and Facilities: The Contractor shall preserve and/or protect existing and new pavements and other facilities from damage due to construction operations. Existing pavements, facilities, utilities, or that are damaged shall be replaced or reconstructed to original strength and appearance at the Contractor's expense. The Contractor shall take immediate action to replace any damaged facilities and equipment and reconstruct any damaged area that is to remain in service.

H. Storage Areas

1. The storage areas depicted in the Work Order shall be used to store all idle equipment, supplies and construction materials (other than bulk materials such as aggregate, sand and soil). Storage shall not interfere with operational areas.

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2. All material and equipment shall be stored at storage sites indicated on the contract drawings, or as directed by the Project Representative.
3. Do not store materials or equipment in areas in which the equipment or materials will affect the operation of FAA electronic apparatus.
4. All equipment storage and movement shall have prior approval of the Project Representative.
5. The perimeter of any storage area that abuts an MOVEMENT AREA pavement shall be protected by barricades no more than 10 feet apart marked with yellow flashing lights and flags. Upon completion of all work, remove all and barricades, lights and flags from the project site.
6. Contractor's vehicles, equipment and materials shall be stored in areas designated in the Work Order. Upon completion of the work, the storage area shall be cleaned up and returned to its original condition to the satisfaction of the Project Representative.
7. Equipment not in use during construction and during all non-construction hours shall be parked in the Contractor's storage area. All exceptions shall be approved in advance by the Project Representative. Parking of construction workers' private vehicles shall not be allowed within storage areas located within the MOVEMENT AREA.
8. Stockpile areas shall be used to store all bulk materials needed for the project and may or may not be fenced at the Contractor's option. However, barricades with yellow flashing lights shall be installed where potential conflicts with aircraft or ground vehicular traffic exists. Stockpiles shall not penetrate the FAR Part 77 imaginary surfaces or present FOD problems.

1.12 OBSTRUCTIONS TO NAVIGATION

The Contractor shall limit the height of vehicles, equipment, stockpiled materials excavated earth, to the limits as specified in the Work Order.

1.13 DAILY INSPECTIONS

The Airport Manager's representative will conduct a daily inspection of each construction site before workers leave for the day to ensure that areas surrounding the sites are safe for aircraft operations. Inspector(s) will be watchful for Foreign Object Debris (FOD) that can be ingested into aircraft engines, loose polyethylene and other light materials capable of being blown onto aircraft Movement Areas by wind, unlighted construction and obstruction lights, vehicles and equipment left outside construction

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areas, construction areas left unlocked, access gates left open, weak partitions or fences, etc. All discrepancies shall be corrected before workers depart from the work site.

Inspectors will review potentially hazardous conditions, which may occur during Airport construction, and maintenance including, but not limited to the following:

- A. Trenches, holes, or excavation on or adjacent to any open runway or related safety area.
- B. Unmarked/unlighted holes or excavations in any apron, open taxiway, open taxilane, or related safety area.
- C. Mounds or piles of earth, construction materials, temporary structures, or other objects on or in the vicinity of any open runway, taxiway, taxilane or in a related safety, approach or departure area.
- D. Pavement drop-offs or pavement turf lips (either permanent or temporary) which would cause, if crossed at normal operating speeds, damage to aircraft that normally use the Airport.
- E. Vehicles or equipment (whether operating or idle) on any open runway, taxiway, taxilane, or in any related safety, approach or departure area.
- F. Vehicles, equipment, excavations, stockpiles, or other materials which could impinge upon Instrument Approach Critical Areas (IACA) and degrade or otherwise interfere with electronic signals from radios or electronic IACA or interfere with visual IACA facilities.
- G. Unmarked utility, instrument approach aids, weather service, runway lighting, or other power or signal cables that could be damaged during construction.
- H. Objects (whether marked/flagged or not) or activities anywhere on or in the vicinity of Airport which could be distracting, confusing, or alarming to pilots during aircraft operations.
- I. Unflagged/unlighted low visibility items (such as tall cranes, drills, etc.) in the vicinity of an active runway, or in any approach or departure area.
- J. Misleading or malfunctioning obstruction lights.
- K. Unlighted/unmarked obstruction in an approach to any open runway.
- L. Inadequate approach/departure surfaces (needed to assure adequate landing/takeoff clearance over obstructions or work or storage areas).

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- M. Inadequate, confusing, or misleading marking/lighting of runways (including displaced or relocated thresholds), taxiways, or taxilanes.
- N. Water, snow, dirt, debris, or other transient accumulation which temporarily obscures pavement marking, pavement edges, or derogates the visibility of runway/taxiway marking, lighting or of construction and maintenance areas.
- O. Inadequate or improper methods of marking, barricading, or lighting temporarily closed portions of Airport operation areas.
- P. Trash or other materials with foreign object damage (FOD) potential, whether on runways, taxiways, aprons or related safety areas.
- Q. Inadequate fencing or other marking to separate construction or maintenance areas from open aircraft operating areas.
- R. Inadequate control of vehicle and human access to and non-essential, non-aeronautical activities on, open aircraft operating areas.
- S. Construction/maintenance activities or materials which could impede aircraft rescue-fire fighting (ARFF) vehicle access from ARFF stations to all parts of the runway/taxiway system, runway approach and departure areas, or aircraft parking locations.
- T. Bird attractants such as edibles (food scraps, etc.) trees, brush, other trash, grass/crop seeding, or pond water on or near the Airport.
- U. Personnel at the construction site without proper POS identification.
- V. Vehicles involved in the project do not meet the safety requirements of KCIA Rules and Regulations.
- W. Improperly marked, lighted and flagged vehicles involved in the project.

All work shifts, including the nightly work shifts are totally inclusive of the Contractor moving onto the site, performing work activities, performing all clean-up, having the work area and haul routes inspected and approved by the inspector(s) and moving off the site. The Contractor shall provide adequate lighting for the needs of the inspection personnel.

Any Aircraft Movement Surface or adjoining runway, taxiway or taxilane safety area that does not pass inspection must remain closed until such time cleanup is performed and approved. Damages may be assessed for any delays in the opening of the surface.

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1.14 EMERGENCY PROCEDURES

- A. The Contractor shall be familiar with Airport emergency procedures and shall conduct his operation so as not to conflict with such events. Clear routes for Airport Rescue and Fire Fighting (ARFF) equipment shall be maintained in operational condition at all times.
- B. In case of an emergency caused by an accident, fire, or personal injury or illness, KCIA Police are to be immediately notified by calling 296-7392. KCIA ARFF will coordinate with other emergency agencies as necessary.

1.15 ADMINISTRATIVE REQUIREMENTS

- A. Applicability: The provisions of this section shall apply to the Prime Contractor, subcontractors at all tiers, and suppliers.
- B. Exclusion From Claims: Impacts caused by failure of the Prime Contractor, subcontractors at all tiers, and all others to comply, implement and maintain the provisions of this section shall not be cause for a claim of delay or increased cost to the Airport.

END OF SECTION

**King County International Airport Recabling Taxiway Alpha Lighting System
Project Meetings**

SECTION 01200

PROJECT MEETINGS

PART 1 GENERAL

1.01 PRECONSTRUCTION CONFERENCE

- A. Prior to beginning construction, a meeting of representatives of the Contractor and its subcontractors, King County International Airport, and other affected agencies will be held. The purpose of the meeting will be to establish lines of authority and communication and identify duties and responsibilities of the parties. Discussion will cover specific contract plans, specifications, scope of the proposed work, staging areas, site access, airfield operations, and phasing of the work.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

**King County International Airport - Recabling Taxiway Alpha Lighting System
Contract Modification Procedures**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Terms and Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:

Division 1 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Owner will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on Field Directive Form.

1.4 OWNER INITIATED CHANGE PROPOSAL REQUESTS

- A. Owner will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time on the Change Proposal Form, included at the end of this Section. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Owner are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the Change Order.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. Labor, material and equipment cost shall be in accordance with the General Terms and Conditions, Section 00700.

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Contract Modification Procedures**

- b. If a change in Contract Time is requested, include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. The Owner and Contractor acknowledge acceptance in accordance with Section 00700, General Terms and Conditions.
- C. Distribution of Executed Copies: One to Contractor, and one to Project Representative.
- D. Change Proposals shall be numbered numerically.

1.5 CONTRACTOR'S REQUEST FOR A CHANGE ORDER

- A. Contractor may Request a Change Order as specified in Section 00700, General Terms and Conditions: a Request for Change Order Form is included at the end of this Section.
- B. Distribution of Request: One to Owner, One to Project Representative.
- C. Owner shall accept or deny a Request for a Change Order in accordance with Section 00700, General Terms and Conditions.
- D. Request for Change Proposals shall be numbered alphabetically.

1.6 CHANGE ORDER EXECUTION PROCEDURES

- A. Change Orders shall be prepared monthly or at such intervals as the Owner and Contractor deem most practical and will be numbered chronologically
- B. Change Proposals, negotiated Change Proposals, and negotiated acceptable Request for Change Orders or other agreements on the terms and conditions of any change in the Work, signed by both parties shall form the content of the bilateral Change Order, as set forth in the General Terms and Conditions.
 - 1. Form: Change Order form included after Part 3, signed by both the Owner and Contractor.
 - 2. Distribution: Four (4) Originals to Owner.
 - 3. Owner transmits one (1) copy each to Contractor and Project Representative.
- C. For Change Proposals, Request for Change Proposals or other changes within the general scope of the Contract that the Owner and Contractor cannot agree upon the appropriate price or terms, the Owner may issue a unilateral Change Order as set forth in the General Terms and Conditions.

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Contract Modification Procedures**

1. Form: Change Order forms included after this Section, signed by the Owner.
2. Distribution: Four (4) Originals to Owner.
3. Owner transmits one (1) copy each to Contractor and Project Representative.

END OF SECTION



KING COUNTY, WASHINGTON
Field Directive

PROJECT: _____ FIELD DIRECTIVE _____
DATE: _____
TO: _____ ATTENTION _____

You are directed to proceed with work as described below and/or detailed on the attachments referred to:

Reason for Directive:

It is our opinion that this work is not extra to the Contract and direct you to do the work. If you consider the above to be extra to the Contract, you must prepare and submit a Request for Change Order as described in the General Terms and Conditions.

Recommended by: _____
Technical Representative Title Date

Authorized by _____
Project Representative Title Date



KING COUNTY, WASHINGTON

Change Proposal

REQUEST FOR PROPOSAL

PROJECT: [Type project name]

DATE: [Type Date]

JOB NO: [Type Contract Number]

CHANGE PROPOSAL NO:

TO: [Type in Contractor's Name]

In connection with your Contract with KING COUNTY dated [Original date of Contract] please furnish, your proposal for performing the changes outlined below and detailed on the attachments referred to, within [Insert number of days] calendar days:

ARCHITECT/ENGINEER

BY:

DATE:

TO: [Project Manager], Project Manager

We propose to perform all changes described in the above request for a total ADDITION/DEDUCTION to the Contract sum of:

(Washington State Sales Tax not included)

We have attached hereto Cost Estimate Detail Sheets Nos. _____

The foregoing amount covers all direct and indirect costs related to this change and to the effect of the change on the remainder of the project. All other provisions remain in full force and effect.

We request the completion date be extended _____ calendar days because of this work.

BY:

DATE:

CONTRACTOR

TO: KING COUNTY

We have carefully examined the foregoing proposal and find it to be in order and the cost reasonable. We therefore recommend its acceptance. Following is a summary of the Contract amount:

BY:

DATE:

ARCHITECT/ENGINEER

AUTHORIZATION

The foregoing proposal is accepted and authorizes the performance of the changes specified. This instrument when signed below, constitutes authority to proceed with the above work. A formal change Order in this amount will follow. Billings cannot be honored for this change until issuance of the formal Change Order.

AUTHORIZED BY: _____

DATE: _____



KING COUNTY, WASHINGTON
Contract Change Order

Contract No.		
Change Order No.		Page 1 of
Project:		

REQUEST FOR PROPOSAL	TO: [Type in Contractor's Name]		
	In connection with your Contract with KING COUNTY dated [Original date of Contract] please furnish your proposal for performing the changes outlined below and detailed on the attachments referred to:		
PROPOSAL	BY: _____ DATE: _____		
	ARCHITECT/ENGINEER		
	TO: [Architect/Engineer], Architect/Engineer		
	We propose to perform all changes described in the above request for a total ADDITION/DEDUCTION to the Contract sum of:		
	(Washington State Sales Tax not included)		
RECOMMENDATION	We have attached hereto Cost Estimate Detail Sheets Nos. _____		
	The foregoing amount covers all direct and indirect costs related to this change and to the effect of the change on the remainder of the project. All other provisions remain in full force and effect.		
	We request the completion date be extended _____ calendar days because of this work.		
	BY: _____ DATE: _____		
	CONTRACTOR		
	Original Contract Sum	Previous Total (w/tax)	
	Original Sum Sales Tax	This Change (Add/Ded)	
	Total Original Sum Plus Tax	This Change Sales Tax	
	Previous Additions (w/tax)	Total This Change Plus Tax	
	Previous Deductions (w/tax)	New Total	
AUTHORIZATION	BY: _____ DATE: _____		
	ARCHITECT/ENGINEER		
	KING COUNTY hereby accepts the foregoing proposal and authorizes the performance of the changes specified. This instrument constitutes a Change Order to the Contract only when authorizing signature is affixed.		
	Manager, Capital Planning & Devel. Div.	Date _____	AUTHORIZED BY: _____
	Supervisor	Date _____	_____ for King County Executive
	Project Manager	Date _____	Date: _____

**King County International Airport - Recabling Taxiway Alpha Lighting System
Payment Procedures**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Terms and Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.3 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

Submit the Schedule of Values to Owner at the Pre-Construction Conference.

- B. Format and Content: Use the Construction Schedule activities to establish line items for the Schedule of Values. Provide at least one line item for each Schedule activity.

1. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:

- a. Schedule Activity ID number.
- b. Description of Schedule activity.
- c. Scheduled Dollar Value rounded to nearest whole dollar.

Total shall equal Contract Sum.

2. Each item in the Schedule of Values shall include total cost and proportionate share of general overhead and profit for each item.

- a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.

3. Schedule of Values Updating: Update and resubmit the Schedule of Values before each Application for Payment, include all approved Change Orders.

**King County International Airport - Recabling Taxiway Alpha Lighting System
Payment Procedures****1.4 APPLICATIONS FOR PAYMENT**

- A. Each Application for Payment shall be consistent with pervious applications and payments as approved by the Owner.
- B. Payment Application Forms: Use King County Certificate for Payment form.
 - 1. Schedule of Values form amended to include the following for each line item:
 - a. Current % complete.
 - b. Current value in place.
 - c. Previous amount paid.
 - d. Amount due this period.
 - e. Balance to finish.
- C. Notarize and execute by person authorized to sign legal documents on behalf of Contractor. Owner will return incomplete applications without action.
- D. Transmittal: Submit three (3) signed and notarized original copies of each Certificate for Payment and Schedule of Values to Owner. One copy shall include project schedule and most current updates, affidavits signed by subcontractors, monthly utilization reports, as required by the General Terms and Conditions.

1.5 INITIAL PAYMENT

- A. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include but are not limited to the following:
 - 1. List of subcontractors.
 - 2. Schedule of Values.
 - 3. Contractor's Construction Schedule.
 - 4. Submittals Schedule (preliminary if not final).
 - 5. List of Contractor's staff assignments.
 - 6. Intent to Pay Prevailing Wages.
 - 7. Certificates of Insurance from all subcontractors.

1.6 FINAL PAYMENT APPLICATION

- A. Prior to final payment and before the issuance of a Final Certificate for Payment, submit to the Owner the following in addition to the requirements listed in the General Terms and Conditions, Section 00700:
 - 1. Certification than Owner's designated maintenance and operation personnel have been instructed as specified in Section 01770.
 - 2. Final cleaning has been completed as specified in Section 01770.

**King County International Airport - Recabling Taxiway Alpha Lighting System
Payment Procedures**

3. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
4. Certificate of Compliance.

END OF SECTION

Certificate for Payment

- ☐ Owner
- ☐ Architect
- ☐ Contractor
- ☐ Field
- ☐ Other



CAPITAL PLANNING & DEVELOPMENT DIVISION

PROJECT:

TO: (Owner)

King County
Capital Planning & Development
500 Fourth Avenue, Room 320
Seattle, WA 98104

ARCHITECT'S PROJECT NO.:
CONTRACT FOR:
CONTRACT NO.:
CONTRACT DATE:

In accordance with this Contract and the attached Application For Payment, the Contractor is entitled to payment in the amount stipulated below. The present status of the account for this Contract is as follows:

		ADDITIONS \$	DEDUCTIONS \$		
Change Orders approved in previous months by Owner — TOTAL				a) ORIGINAL CONTRACT SUM	\$
Subsequent Change Orders				b) TOTAL NET CHANGE ORDERS	\$
Number	Approved (Date)			c) CONTRACT SUM TO DATE	\$
				d) TOTAL COMPLETED TO DATE	\$
				e) PREVIOUSLY COMPLETED	\$
				f) THIS REQUEST	
				g) RETAINAGE 5% of (f)	
				h) SALES TAX ____ of (f)	
TOTALS					
Net change by Change Orders		\$		i) TO BE PAID BY KING COUNTY (f-g+h)	

Architect:

BY:

DATE:

This Certificate is not negotiable. It is payable only to the payee named herein and its issuance, payment and acceptance are without prejudice to any rights of the Owner or Contractor under their Contract. If AIA DOCUMENT G702 APPLICATION FOR PAYMENT, or other application form containing satisfactory evidence of payment for Work previously completed DOES NOT ACCOMPANY THIS CERTIFICATE, the Contractor shall first provide the equivalent certification by completing and executing the following:

State of:

County of:

Subscribed and sworn to before me this

day of _____, 20 ____

Notary Public

My Commission expires:

The undersigned certifies the Work covered by this Certificate for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid for Work for which previous Certificates for Payment were issued and payments received, and that the current payment shown herein is now due, and that prevailing wages have been paid in accordance with pre-filled statements on file with the Department of Labor and Industries.

Contractor:

By:

Date:

CERTIFICATE NO:

DATE OF ISSUANCE:

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King County International Airport
King County International Airport - Recabling Taxiway Alpha Lighting System
Submittals Procedure

SECTION 01300
SUBMITTALS PROCEDURE

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies procedures for Contractor submittals. Where required by the Specifications, submit descriptive information which will enable the Project Representative to assess whether the Contractor's proposed materials, equipment or methods of work are in general conformance to the design concept and in compliance with the Plans and the Specifications. The information to be submitted shall consist of drawings, specifications, descriptive data, certificates, samples, test results and such other information, all as specifically required in the Plans or Specifications. The provisions of this Section are supplementary to Paragraph 00700-4.4. It is not necessary to obtain multiple approvals for the same material used.

PART 2 PRODUCTS

2.01 CONTRACTOR RESPONSIBILITIES

- A. The Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall ensure that the material, equipment or method of work shall be as described in the submittal. Verify that the material and equipment described in each submittal conforms to the requirements of the Specifications and Drawings prior to transmittal to the Project Representative. Ensure that there is no conflict with other submittals and notify the Project Representative in each case where such submittal may affect the work of another contractor or King County. The Contractor shall ensure coordination of submittals among the related crafts and subcontractors.
- B. If the Contractor's review determines that the information shows deviations from the Specifications or Drawings, submit a request for substitution in accordance with Paragraph 00700-4.8.

PART 3 EXECUTION

3.01 TRANSMITTAL PROCEDURE

- A. General:
1. A unique number, sequentially assigned, shall be noted on the transmittal form accompanying each Submittal. Original submittal numbers shall have the following format: "XXX"; where "XXX" is the sequential number assigned by the Contractor. Resubmittals shall have the following format: "XXX-Y"; where "XXX" is the originally assigned submittal number and "Y" is a sequential letter assigned for resubmittals, i.e., A, B or C being the 1st, 2nd and 3rd resubmittals, respectively. Submittal 25B, for example, is the second resubmittal of Submittal 25.
- B. Deviation from Contract: Submit a request for substitution or deviations from the Specifications, or Drawings. The request shall be in accordance with Paragraph 00700-4.8 and shall also include the reason for the deviation and cost differential for the deviation. Deviations from the Contract shall be authorized by Change Order only.
- C. Submittal completeness: Submittals which do not have all the information required to be submitted are not acceptable and will be returned without review.

3.02 REVIEW PROCEDURE

- A. For each required submittal, submit 2 copies of all the submitted information. Individual sheets shall not exceed 22 inches x 34 inches.

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- B. Unless otherwise specified, within 14 days after receipt of the submittal, the Project Representative will review the submittal and return it to the Contractor. The returned material will consist of 1 marked-up copies of the submittal. The returned submittal will indicate one of the following actions:
1. If the review indicates that the material, equipment or work method is in general conformance with the Contract Drawings and Specifications, the submittal copies shall be marked "No Exceptions Taken". In this event, the Contractor may begin to incorporate the material/equipment/work method covered in the submittal.
 2. If the review indicates that the submittal is insufficient or that limited corrections are required, the submittal copies shall be marked "Note Markings". The Contractor may begin to implement the work method or incorporate materials/comments covered in the submittal in accordance with the corrections/comments noted. Where submittal information is to be incorporated in O&M data, a corrected copy shall be provided; otherwise, no further action is required.
 3. If the review reveals the submittal is insufficient or contains incorrect data and the comments require revision and resubmittal, the submittal copies shall be marked "Comments Attached - Resubmit". (In this case, the Contractor shall not then undertake work covered by this submittal until the submittal has been revised, resubmitted and returned to the Contractor with a determination of "No Exception Taken".
 4. If the review reveals that the material, equipment or work method is not in general conformance with the design concept or in compliance with the Contract Drawings/Specifications, or if the submittal is incomplete, the submittal copies shall be marked "Rejected". Submittals containing deviations from Contract Drawings/Specifications which have not been clearly identified and which have not been noted previously in PWC correspondence also shall be rejected. (In this case, the Contractor shall not then undertake work covered by this submittal until the submittal has been revised, resubmitted and returned to the Contractor with a determination of "No Exceptions Taken".

3.03 EFFECT OF REVIEW OF CONTRACTOR'S SUBMITTALS

- A. Review of drawings, methods of work or information regarding materials or equipment the Contractor proposes to provide, shall not relieve the Contractor of its responsibility for errors therein and shall not be regarded as an assumption of risks or liability by the Project Representative on behalf of King County, or by any officer or employee of King County; and the Contractor shall have no claim under the Contract on account of the failure, or partial failure, of the method of work, material or equipment so reviewed. A mark of "NO EXCEPTIONS TAKEN" or "NOTE MARKINGS" shall mean that King County has no objection to the Contractor, upon the Contractor's own responsibility, using the plan or method of work proposed, or providing the materials or equipment proposed.

END OF SECTION

**King County International Airport – Recabling Taxiway Alpha Lighting System
Project Management and Coordination**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Terms and Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 COORDINATION

- A. Contractor shall coordinate construction operations included in various Sections of the Specifications to ensure efficient and orderly installation of each part of the Work.
- B. Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water and materials.

1.3 PRE-CONSTRUCTION CONFERENCE

- A. Owner will schedule and conduct a meeting prior to start of construction.
 - 1. Owner will provide meeting location at a central site, convenient for all parties. Attendance is required of the following:
 - a. Contractor's Superintendent and Project Manager.
 - b. Major Subcontractors.
 - c. Others, as appropriate.
- B. This meeting is to review Contract administration requirements and prepare the way for commencement of the Work.
 - 1. Agenda
 - a. Owner will discuss pertinent detail information paralleling Contract Documents requirements such as:
 - 1) Designation of Authority.
 - 2) The Work; sequence, phasing, and occupancy.
 - 3) Job communications.
 - 4) Contractor's use of the premises.
 - 5) Special project procedures.
 - 6) Procedures and processing.
 - a) Field Directives.
 - b) Proposal requests.
 - c) Request for Change Orders.

**King County International Airport – Recabling Taxiway Alpha Lighting System
Project Management and Coordination**

- d) Submittals.
- e) Change Orders.
- f) Application for Payment
- g) Other.
- h) Visits/Reports.
- 7) Record Documents.
- 8) Construction facilities, controls, and construction aids.
- 9) Temporary utilities.
- 10) Security procedures.
- 11) Safety and first-aid procedures – Red Cross Certification.
- 12) Working Hours.
- 13) Housekeeping procedures.
- 14) Parking.
- 15) Other.
- b. Contractor will present and distribute information indicating:
 - 1) List of major subcontractors and suppliers.
 - 2) Preliminary Construction Schedule.
 - 3) Schedule of values.
- 2. Minutes: The Owner will write and distribute notes to all parties in attendance.

1.3 PROGRESS MEETINGS*A. Owner's responsibilities shall include:**

- 1. Schedule and administer progress meetings.
- 2. Prearrange weekly meeting time and day.
- 3. Make physical arrangements for meetings.
- 4. Preside at meetings.
- 5. Record minutes; include all significant proceedings, decisions, and summarize questions raised.
- 6. Reproduce and distribute copies of minutes within three days of each meeting to:
 - a. all meeting participants.
 - b. all parties affected by decisions.

B. Persons to Attend

- 1. Owner's Project Representative.
- 2. The Contractor and any subcontractors, materialmen, or vendors whose presence is necessary or requested.

C. Agenda shall be as follows:

- 1. Review and approve minutes of previous meeting.
- 2. Construction schedule.
- 3. Submittals.
- 4. Contract Modifications.

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Project Management and Coordination**

5. Design/Construction issues.
6. Miscellaneous information.
7. Pay Request (as required).
8. Walk Through/Inspection of Work.

END OF SECTION

**King County International Airport – Recabling Taxiway Alpha Lighting System
Construction Progress Documentation**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Terms and Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Preliminary Construction Schedule.
2. Contractor's Construction Schedule.
3. Submittals Schedule.
4. Daily construction reports.

- B. Related Sections include the following:

1. Division 1 Section "Payment Procedures" for submitting the Schedule of Values.
2. Division 1 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
3. Division 1 Section "Submittal Procedures" for submitting schedules and reports.
4. Division 1 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
2. Predecessor activity is an activity that must be completed before a given activity can be started.

- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of the Project.

- C. Critical Path: See General Terms and Conditions for definition.

- D. Event: The starting or ending point of an activity.

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- E. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Fragment: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- G. Major Area: A story of construction, a separate building, or a similar significant construction element.
- H. Milestone: A key or critical point in time for reference or measurement.
- I. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

1.4 SUBMITTALS

- A. Submittals Schedules must be arranged using the following information in a tabular format:
 - 1. Scheduled date for first submittal.
 - 2. Specification Section number and title.
 - 3. Submittal category (action or informational).
 - 4. Name of subcontractor.
 - 5. Description of the Work covered.
- B. Preliminary Construction Schedule: Submit one printed copies; on a single sheet of reproducible media large enough to show entire schedule for the entire construction period.
- C. Final Construction Schedule: Submit one printed copy of schedule large enough to show entire schedule for entire construction period.
 - 1. This Final Construction Schedule signed by the Owner and Contractor and shall become the Original Baseline Schedule. This Baseline Schedule shall be preserved in its original form on a computer disk until final payment has been made.
 - 2. Submit an electronic copy of schedule, using software indicated, on 3-1/2-inch (89mm) diskettes, formatted to hold 1.44 MB of data, and labeled to comply with

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Construction Progress Documentation**

requirements for submittals. Include type of schedule (Initial or Updated) and date on label.

- D. CPM Reports: Concurrent with CPM schedule submit the following computer-generated reports. Format for each activity in reports shall contain activity number, activity description, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float.

1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.
2. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
3. Total Float Report: List of all activities sorted in ascending order of total float.
4. Earnings Report: Compilation of Contractor's total earnings from the Notice to Proceed until most recent Application for Payment.

- E. Daily Construction Reports: Submit one copy at weekly intervals.

1.5 QUALITY ASSURANCE

- A. Scheduling Consultant Qualifications: An experienced specialist in CPM scheduling and reporting.

1.6 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
1. Secure time commitments for performing critical elements of the Work from parties involved.
 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 – PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review,

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Construction Progress Documentation**

resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.

1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
2. Initial Submittal: Submit concurrently with preliminary construction schedule. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."
- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial Completion.
 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
 1. Activity Duration: Define activities so no activity is longer than 15 days, unless specifically allowed by Owner.
 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 4. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Owner's administrative procedures necessary for certification of Substantial Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, beginning and completion of the runway boring and associated pipe insulation, Substantial Completion, and Final Completion.

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- F. **Cost Correlation:** At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.
 - 1. Refer to Division 1 Section “Payment Procedures” for cost reporting and payment procedures.
- G. **Contract Modifications:** For each proposed contract modification and concurrent with its submission, that the Contractor is requesting a time extension, prepare a time-impact analysis using fragments to demonstrate the effect of the proposed change on the overall project schedule and critical path.
- H. **Computer Software:** Prepare schedules using a program that has been developed specifically to manage construction schedules.
 - 1. Primavera Project Planner, Primavera Suretrak, Microsoft Project for Windows 98, or other software as approved by the Owner.

2.3 PRELIMINARY CONSTRUCTION SCHEDULE

- A. Submit preliminary construction schedule at the Pre-construction Conference. Format shall be as defined in Paragraph 2.4, Contractor’s Final Construction Schedule.

2.4 CONTRACTOR’S FINAL CONSTRUCTION SCHEDULE

- A. **General:** Prepare network diagrams using AON (activity-on-node) format.
- B. **Submit Final Schedule** within 30 days of date established for the Notice to Proceed.
- C. **Schedule:** Prepare Contractor’s Construction Schedule using a computer software developed specifically to manage construction schedules.
 - 1. Activities shall include the purchasing of long lead items, shop drawing review and approval, and other pertinent activities as well as actual construction activity. No activity shall be longer than fifteen (15) calendar days. Activities longer than fifteen (15) calendar days shall be subdivided or shall have the approval of the Owner.
 - 2. The Schedule shall show the sequence and interdependence of all activities.
 - 3. The Project critical path shall be clearly identified.
 - 4. The dollar value assigned to each activity shall be the same as the Schedule of Values. When added together the dollar value of activities are to equal the Contract price.
 - 5. Schedules shall be printed on sheets no larger than 24” x 36”.

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Construction Progress Documentation**

D. Tabulated Reports: For each Final Schedule submission, prepare tabulated reports showing the following:

1. Contractor or subcontractor and the Work or activity.
2. Description of activity.
3. Immediate preceding and succeeding activities.
4. Early and late start dates.
5. Early and late finish dates.
6. Activity duration in workdays.
7. Total float or slack time.
8. Average size of workforce.
9. Dollar value of activity (coordinated with the Schedule of Values).

E. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:

1. Identification of activities that have changed.
2. Changes in early and late start dates.
3. Changes in early and late finish dates.
4. Changes in activity durations in workdays.
5. Changes in the critical path.
6. Changes in total float or slack time.
7. Changes in the Contract Time.

2.5 REPORTS

A. Daily Construction Reports: Prepare a daily construction report, using the Owner's Report Form included in Section 01321, recording the following information concerning events at Project site:

1. List of subcontractors at project site.
2. Approximate count of personnel at Project site.
3. Accidents.
4. Inspections.
5. Unusual events (refer to special reports).
6. Stoppages, delays, shortages, and losses.
7. Orders and requests of Inspectors.

PART 3 – EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities.

**King County International Airport – Recabling Taxiway Alpha Lighting System
Construction Progress Documentation**

1. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 2. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Owner, separate contractors, and other parties identified by Contractor with a need-to-know schedule responsibility.

END OF SECTION

Contractor's Daily Progress Report

Date: _____

S M T W T F S
(Circle day of week)

Submitted By: _____

Weather Conditions

Clear	Partly Overcast	Overcast	Rain	Snow
to 32°	32° - 50°	50° - 70°	70° - 85°	85° and up
WIND	Calm	Light	Moder.	High
HUMIDITY		Dry	Moder.	Humid

CPM Activity				
ID No.	Activity Name	Started	In Progress	Completed

USE OF REPORT: List all activities that had any work performed today. Check appropriate box for each activity.

Subcontractors on Site _____

Personnel on Site: (Approx.) _____

Accidents: _____

Inspections: _____

Delays, Stoppages, Shortages, or Losses: _____

Orders/Requests of Building Inspectors: _____

Unusual Events: _____

Signature: _____

**King County International Airport Recabling Taxiway Alpha Lighting System
Temporary Facilities and Controls**

SECTION 01380

PHOTOGRAPHS

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies photographs to be provided by the Contractor prior to and after construction.

PART 2 PRODUCTS

2.01 GENERAL

- A. Photographs shall be a minimum 35 mm film size and shall indicate on the front of each print the date, Contract number and site number, and location where the photograph was taken. Two 4-inch x 6-inch glossy prints of each exposure, together with the negatives, shall be delivered to the Project Representative within 10 days following each set of exposures. Samples of prints of acceptable quality and identification are available in the office of the Project Representative for examination. Photographs shall be taken at locations to be designated by the Project Representative. The photographer shall be equipped to photograph exterior exposures, with lenses ranging from wide-angle to telephoto.

2.02 PRE-CONSTRUCTION PHOTOGRAPHS

- A. Provide prior to commencement of work on the site.

2.03 POST-CONSTRUCTION PHOTOGRAPHS

- A. Take the number of exposures specified upon acceptance of the work.

PART 3 EXECUTION

Not used.

END OF SECTION

King County International Airport – Recabling Taxiway Alpha Lighting System**Quality Control****PART 1 GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Terms and Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 DESCRIPTION

- A. Provide and maintain an effective quality control program and perform sufficient inspections and tests of all items of work, including those of subcontractors, to ensure compliance with Contract Documents.
- B. Furnish appropriate facilities, instruments, and testing devices required for performance of the quality control program.
- C. Quality Controls must be adequate to cover construction operations and be keyed to the construction sequence.
- D. Quality Control Program shall provide for procedures to ensure that the latest Contract Documents, shop drawings, and instruction by the Contract are used for fabrication, testing, and inspection.
- E. The Contractor is responsible for the coordination of the work for all trades under this Contract and with other contractors. The Contractor shall check specifications, addenda, and the drawings covering all trades as the work progresses. The Contractor shall promptly report to the Owner any omissions, conflicts, or points requiring clarification.

PART 2 CONTRACTOR'S QUALITY CONTROL**2.1 PRE-INSTALLATION QUALITY CONTROL****A. General:**

- 1. Equipment and Material: It is the Contractor's responsibility to be certain that all equipment and materials selected by him, or for him by his subcontractors or material suppliers, conform exactly to the requirements of the Drawings and Technical Specifications. The approval of a manufacturer's name by the Owner does not relieve the Contractor of the responsibility for providing materials and equipment which comply with the Contract Documents.
- 2. Before the installation of every major unit of work which requires coordination with other work, ensure that the unit of work can be installed and function as intended and required in conjunction with other work which has preceded or

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will follow. If the Installer reports unsatisfactory conditions for installation, do not proceed until these conditions have been corrected.

2.2 INSTALLATION QUALITY CONTROL

- A. **Manufacturer's Recommendations:** Unless otherwise noted or directed, install all work in strict accordance with Manufacturer's recommendations for best results. Do not omit any preparatory steps or installation procedures unless specifically modified or exempted by these Documents.
- B. **Inspection:** Inspect each item of materials or equipment immediately prior to installation. Reject damaged and defective items.
- C. **Verify Dimensions:** Recheck measurements and dimensions of the Work, as an integral step of starting each installation.
- D. **Modifications Necessary to Accommodate Varying Products:** In the event the Contractor receives approval to provide another manufacturer's product or assembly, it shall be understood that any modifications necessary to the proper installation and function of the substituted items shall be made by the Contractor at no additional cost to the Owner. Contractor shall bear the additional cost required for necessary detailing to accommodate the change.
- E. **Conditions for the Work:** Install work during conditions of temperature, humidity, exposure, forecasted weather, and status of project completion which will ensure the best possible result for each unit of work in coordination with the entire work. Isolate each unit of work from noncompatible work as required to prevent deterioration or damage. Work must also be scheduled and conducted to be consistent with Airport operating conditions.
- F. **Closing-in the Work:** Coordinate enclosure of work with required inspections, and tests, so as to avoid the necessity of uncovering work for that purpose.
- G. **Adjustment and Cleaning:** Adjust, clean, lubricate, restore marred finishes, and protect newly installed work, to ensure that it will remain without damage or deterioration during the remainder of the construction period. If such damage or deterioration should occur, restore to new condition.

PART 3 QUALITY ASSURANCE BY OWNER**3.1 CONFORMITY TO CONTRACT DOCUMENTS**

- A. The Owner reserves the right to take and analyze samples of materials for conformity to the Contract Documents at any time.

King County International Airport – Recabling Taxiway Alpha Lighting System**Quality Control**

- B. The Contractor shall furnish samples upon request for conformity to the Contract Documents.
- C. Rejected samples of materials shall be immediately removed from the site at the Contractor's expense. Cost of testing of materials not complying with the Contract Documents shall be paid by Contractor.

3.2 RE-EXAMINATION OF WORK

- A. When required by the Owner, the Contractor shall provide facilities and labor necessary for a complete re-examination of work under suspicion.
- B. If the Owner finds the re-examined work defective, the Contractor shall bear the expense of re-examination and replacement.
- C. If the re-examined work is not found to be defective, the Owner shall bear the expense of re-examination.

3.3 SCHEDULE OF TESTS AND INSPECTIONS BY OWNER'S TESTING LAB

- A. Contractor's Responsibilities:
 - 1. Cooperate with engineering and laboratory personnel. Provide access to work required to be inspected/tested, and to Manufacturer's operations.
 - 2. Notify Owner of all testing to be performed sufficiently in advance (not less than 48 hours) to allow for the appropriate inspection of the testing procedures.

3.5 PRODUCT WARRANTY

- A. The Contractor warrants to the Owner that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not so conforming to these standards may be considered defective. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. The warranty provided herein shall be in addition to and not in limitation of any other warranty or remedy required by law or by the Contract Documents. For the purposes of this Subsection "new materials and equipment" means that all such materials and equipment shall be in current production at time of bidding. No discontinued lines, patterns, materials, or colors will be permitted.

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Quality Control

END OF SECTION

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**King County International Airport Recabling Taxiway Alpha Lighting System
Temporary Facilities and Controls**

SECTION 01500

CONSTRUCTION FACILITIES

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Temporary utilities: electricity, water, and sanitary facilities.
 - 2. Temporary controls: barriers, fencing, protection of work, and security.
- B. Related Sections:
 - 1. Section 01560 - Environmental Controls

1.02 TEMPORARY UTILITIES

- A. Contractor shall supply its own power and water for construction and operation.
- B. Make arrangements for power requirements, as needed, with the electrical utility for power takeoff points, voltage and phasing requirements, transformers and metering and pay resulting costs and fees.

1.03 TEMPORARY SANITARY FACILITIES

- A. Contractor shall provide or make arrangements for the use of toilet and wash-up facilities for the work force at the site. Comply with applicable laws, ordinances and regulations pertaining to the public health and sanitation of dwellings and camps.
- B. No existing sanitary facilities are available for the Contractor's use.

1.04 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities from damage during construction and demolition operations. All barriers utilized on the airside at the Airport must comply with FAA Standards.

1.05 PROTECTION OF NEW WORK AND EXISTING PROPERTY

- A. Protect existing structures, property, cultivated or planted areas and other surface improvements from damage and provide bracing, shoring or other work necessary for such protection.
- B. Provide temporary fence as required to separate work areas from the existing facility.
- C. Protect installed work and provide special protection where directed by the Project Representative.
- D. Protect finished concrete work and newly seeded areas from traffic.
- E. Repair or replace damaged structures, work, materials or equipment to a condition equal to or better than prior to the damage at no additional cost to King County.

1.06 RESTORATION OF ROAD/SIDEWALK/CURB

- A. Unless otherwise specified, the Contractor shall resurface and bring to original grade and section roads, sidewalks, and curbs in which the surface is removed, broken or damaged, or in which the ground has caved or settled during the work under this Contract. The Contractor shall also clean and repair roads, sidewalks, and curbs used by the Contractor. Before resurfacing material is placed, trim edges of pavements back far enough to provide clean, solid, vertical faces, free of loose material.

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**King County International Airport Recabling Taxiway Alpha Lighting System
Temporary Facilities and Controls**

- B. All cultivated or planted areas and other surface improvements which are damaged by actions of the Contractor shall be restored and/or replaced as nearly as possible to their original condition.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used.

END OF SECTION

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**King County International Airport – Recabling Taxiway Alpha Lighting System
Haul Routes**

PART 1 - GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

The provisions and intent of the Contract, including the General Conditions, Supplementary Conditions and General Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 01150 - Operational Safety on Airports

1.02 DESCRIPTION OF WORK

- A. General:

The Haul Route includes, when applicable, the route utilized by vehicles and equipment for the delivery and removal of material, equipment and supplies from source and/or destination outside the property boundary of the King County International Airport (KCIA) to the point of use and/or removal in the performance of the contract. Vehicle Movements in the Air Operations Area must follow the special procedures in Section 01150.

1.03 SUBMITTALS

Before any specified material or equipment is delivered to, or removed from the job site the Contractor shall submit the following information. Submittals shall be in accordance with Section 01300 Submittals Procedure.

- A. Haul Route to the site and return. The Haul Route shall include and be consistent with the route shown on the drawings and discussed herein. (Preconstruction Submittal).
- B. Haul Route within the Air Operations Area. This portion of the haul route shall identify all special activities required for the safety, cleanliness and control of vehicles and equipment within the AOA.
- C. Copies of permits, agreements, or letter of understanding from regulatory agencies, towns, cities, or other governmental entities (Preconstruction Submittal).
- D. Description, owner, vehicle number, and license number of each hauling vehicle.
- E. Each vehicle operator's name and driver's license number.
- F. Location of the Washington State certified scales intended for use during the term of this Contract.

- G. Location of stockpile, equipment and vehicle storage areas, to include heights of such equipment and vehicles to be stored within the areas.

1.04 JOB CONDITIONS

- A. **Removals:** Prior to departure from the construction site each vehicle operator shall note the time and date on the dispatch ticket or vehicle logbook. Each stop with a loaded vehicle, other than for traffic controls, shall be entered into the logbook indicating the circumstances requiring the stop. The time the vehicle enters the disposal site property shall also be noted in the log.
- B. All drivers must comply with the requirements and provisions of Section 01150 – Operational Safety on Airports.

C. **Haul Route Requirements**

The Contractor shall obtain all applicable permits and pay for all permit fees prior to the start of haul operations. The City of Tukwila requires Hauling permits for any project that requires hauling more than 50 cy of any material. The Contractor's operations shall meet the permit conditions at all times during haul operations.

Haul Route to/from the site shall be as specified in the plans or as directed by the Owner. All hauling vehicles shall exit using the same route used to access the site unless noted.

The Owner or KCIA ARFF will inspect traffic control measures and haul route utilization and safety within the Airport's Air Operations Area (AOA), and may modify traffic control measures or the haul route for the purposes of maintaining safety within the AOA.

END OF SECTION

**King County International Airport Recabling Taxiway Alpha Lighting System
Environmental Controls**

SECTION 01560

ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies temporary environmental controls that are required to be maintained during construction.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

3.01 SITE MAINTENANCE

- A. The Contractor shall maintain sites free of waste materials, debris, rubbish and in a clean and orderly condition.
- B. The Contractor shall keep the roadways used for hauling materials to and from the sites clean and free from rubbish and debris. Materials and equipment shall be removed from the sites when they are no longer necessary. Upon completion of the work and before acceptance, the work sites shall be cleared of equipment, unused materials and rubbish to present a clean and neat appearance.
- C. Waste material of any kind will not be permitted to remain on the sites of the work or on adjacent streets. Immediately, upon such materials becoming unfit for use in the work, they shall be collected, carried off the sites and disposed of by the Contractor and at the Contractor's expense.
- D. In the event that waste materials, refuse, debris and/or rubbish are not removed from the work site by the Contractor, the Project Representative reserves the right to have the waste material, refuse, debris and/or rubbish removed and the cost of the removal and disposal shall be paid by the Contractor.
- E. When working dump trucks and/or other equipment on paved surfaces, the Contractor shall clean affected paved surfaces when required by the Project Representative at the conclusion of each day's operations. The Contractor shall be responsible for preventing dirt and dust from escaping from trucks entering or departing the sites by covering dusty loads, washing truck tires or other reasonable means.
- F. Any violation of the above requirements shall be sufficient ground for the Project Representative to order the paved surfaces in question to be cleaned by others and the cost of the operation shall be paid by the Contractor.
- G. Sweep all paved surface to as necessary to keep surfaces clean and suitable for use of Aircraft.

3.02 EROSION CONTROL

- A. The Contractor shall be responsible throughout the life of the project to take all necessary precautions to prevent pollution, erosion, siltation and related damage to the property and the environment.
- B. All silt should be contained within the construction areas. The temporary water pollution control shall contain the following items:

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**King County International Airport Recabling Taxiway Alpha Lighting System
Environmental Controls**

1. As soon as the sites have been cleared and opened for construction, the Contractor shall complete earthwork, compaction, finish-grading and placement of at least the first course of gravel base material.
 2. Critical drainage features such as culverts and catch basins receiving runoff from exposed earth surfaces shall be protected from siltation by temporary gravel berms or check dams made of crushed surfacing top course material and filter fabric securely attached over the grate of the catch basin or inlet.
 3. Stockpiled soil materials shall be protected from erosion at the end of each working day by covering the piles with impervious sheeting or other means approved by the Project Representative.
 4. No drainage systems shall be blocked for more than one working day or during periods of runoff without temporary drainage bypass.
- C. Other or additional temporary water pollution control measures may be required at the discretion of the Project Representative. The Contractor shall bear the costs of such additional temporary water pollution control measures.
- 3.03 AIR POLLUTION CONTROL
- A. The Contractor shall not discharge smoke, dust, and other contaminants into the atmosphere that violate the regulations of legally constituted authorities. Minimize dust nuisance by cleaning, sweeping, and sprinkling with water, or other means. The Contractor shall bear all costs related to the air pollution control. The use of water, in amounts which result in mud on public streets, is not acceptable as a substitute for sweeping or other methods.
- 3.04 NOISE CONTROL
- A. Construction involving noisy operations shall be restricted to the hours as stated in Section 01010. Noisy operations shall be scheduled to minimize their duration.
- B. Comply with local controls and noise level rules, regulations and ordinances which apply to work performed pursuant to the Contract.
- C. Each internal combustion engine, used on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler.
- D. Noise levels for scrapers, pavers, graders and trucks shall not exceed 90 dBA and pile drivers shall not exceed 95 dBA at 50 feet as measured under the noisiest operating conditions. For other equipment, noise levels shall not exceed 85 dBA. Equipment that cannot meet these levels shall be quieted by use of improved exhaust mufflers or other means.
- 3.05 WATER CONTROL
- A. The Contractor shall take extreme care to prevent sediment, petrochemicals or other construction chemicals (e.g., concrete products, sealers, paints, pesticides, etc., or wash water associated with the use of any such materials) from moving off the site or entering any wetland areas, surface waters, or storm drains.
- 3.06 MAINTENANCE OF TRAFFIC AND TRAFFIC CONTROL
- B. Load Restrictions
1. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage which may result from the moving of material or equipment.
 2. The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. The Contractor shall be responsible for all damage done by its hauling equipment and shall correct such damage at its own expense.

END OF SECTION

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**King County International Airport – Recabling Taxiway Alpha Lighting System
Execution Requirements**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, General Terms and Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
1. Construction layout.
 2. Field engineering and surveying.
 3. General installation of products.
 4. Coordination of Owner-installed products.
 5. Progress cleaning.
 6. Starting and adjusting.
 7. Protection of installed construction.
 8. Correction of the Work.

PART 2 - EXECUTION

2.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
1. Before construction, verify the location and points of connection of utility services.
 2. Existing Utilities: The Airport can not guarantee the conditions of the electrical conduits or ducts.
- B. Acceptance of Conditions: The Contractor must examine substrates, areas, and conditions, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
1. Written Report: Where conditions are believed to be detrimental to performance of the Work as required by other Sections, the Contractor must provide to the Project Representative a written report that includes:
 - a. Description of the Work.

King County International Airport – Recabling Taxiway Alpha Lighting System**Execution Requirements**

- b. List of detrimental conditions, including substrates.
- c. List of unacceptable installation tolerances.
- d. Recommended corrections.

2.2 PREPARATION

- A. **Existing Utility Information:** Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. **Existing Utility Interruptions:** Do not interrupt utilities serving facilities other than the planned de-energizing of the taxiway lighting system unless permitted under the following conditions:
 - 1. Notify the Project Representative not less than seven (7) days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without permission from the Project Representative.
- C. **Field Measurements:** Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. **Space Requirements:** Verify space requirements and dimensions of items shown diagrammatically on Drawings.

END OF SECTION

**King County International Airport Recabling Taxiway Alpha Lighting System
Record Drawings**

SECTION 01720

RECORD DRAWINGS

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies requirements for preparing and furnishing record drawings to the Project Representative.

PART 2 PRODUCTS

2.01 GENERAL

- A. Provide the Project Representative one copy of recorded CAD drawings, accurately showing the final as-built location along with changes made during construction for the items listed in Paragraph 3.02 of this Section.

PART 3 EXECUTION

3.01 PROGRESS

- A. Record information concurrently with the progress of construction.

3.02 RECORDING CHANGES

- A. The following shall be recorded on the drawings for work listed in this Section:
 - 1. Actual dimensions, arrangement and materials used when different than shown on the Drawings.
 - 2. Changes made by the Contractor.

3.03 PAYMENT

- A. Submit the record drawings to the Project Representative with the final payment request.

END OF SECTION

**King County International Airport – Recabling Taxiway Alpha Lighting System
Closeout Procedures**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Terms and Conditions and other Division 1 Specifications Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Punch List Inspection procedures.
 - 2. Project Record Documents.
 - 3. Operation and maintenance manuals.
 - 4. Warranties.
 - 5. Instruction of Owner's personnel.
 - 6. Final cleaning.
 - 7. Contract Closeout Documents.

1.3 SUBSTANTIAL COMPLETION

- A. Contractor shall notify the Owner that the Work is substantially complete as required by General Terms and Conditions, Section 00700.
- B. The Owner shall follow the procedures stated in the General Terms and Conditions for determining substantial completion and the issuance of a punchlist.

1.4 FINAL COMPLETION AND PAYMENT

- A. In addition to the requirements for Final Completion and Payment specified in the General Terms and Conditions, the Contractor shall submit to the Owner the following:
 - 1. Certificate of Compliance.
 - 2. Final Affidavit of Amounts Paid.
 - 3. Certification that Owner's personnel have been trained on each system.

1.5 PUNCHLIST PROCEDURES

- A. Owner shall prepare the punchlist (list of incomplete items) when notified by the Contractor that the Work is substantially complete.
 - 1. Punchlist will be organized in sequential order, starting with the site (civil/landscape), exterior of buildings, and proceeding from lowest floor to highest floor.
 - 2. Items applying to each area will be organized by major elements.

**King County International Airport – Recabling Taxiway Alpha Lighting System
Closeout Procedures**

- B. Contractor shall correct all punchlist items and re-issue Owner's punchlist forms with their initials and date complete, along with a written statement that the entire project is complete and ready for the Final Inspection ten (10) days before the date established in the Certificate of Substantial Completion for the completion of the punchlist.
 - 1. If the Contractor takes exception to any of the punchlist items, a written statement must be returned with the punchlist defining specific items and why they have not been corrected.
- C. Owner will perform the Final Inspection to verify that all punchlist items are complete.
- D. Any punchlist items that remain uncompleted after this Final Inspection shall be completed by the Contractor by the date established in the Certificate of Substantial Completion.
 - 1. Should corrections not be made and should additional inspections of the Work be required due to failure of the Contractor to remedy defects listed, the Contractor shall be assessed liquidated damages.

1.6 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Owner's reference during normal working hours.
- B. Record Drawings: Maintain and submit one set of blue- or black-line white prints of Contract Drawings and Shop Drawings
 - 1. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - 2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 - 3. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - 4. Note Change Proposals, Change Order numbers, alternate numbers, and similar identification where applicable.
 - 5. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.
- C. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications. Mark copy to indicate the actual product

**King County International Airport – Recabling Taxiway Alpha Lighting System
Closeout Procedures**

installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Note related Change Orders, Record Drawings, and Product Data, where applicable.

D. Record Product Data: Submit one copy of each Product Data submittal. Mark one set to indicate the actual product installation where installation varies substantially from that indicated in Product Data.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
3. Note related Change Orders, Record Drawings, and Record Specifications, where applicable.

E. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

1.7 NOT USED

1.8 WARRANTIES

A. Submittal Time: Submit written warranties on request of Owner for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Organize warranty documents into an orderly sequence based on the table of contents of the Contract Documents.

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2 by-11-inch (115-by-280-mm) paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

**King County International Airport – Recabling Taxiway Alpha Lighting System
Closeout Procedures**

- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 – NOT USED**PART 3 – EXECUTION****3.1 SITE RESTORATION**

- A. Restore to Owner's satisfaction all areas disturbed by the construction process. All ingress or egress points that are disturbed will have to be regraded, resodded, etc., to restore them to original conditions.
- B. Protect all existing trees and fencing on site from potential Contractor damage above and below grade. If unavoidable damage occurs, notify Owner immediately and a decision will be rendered as to how the Contractor is to replace or repair the damage at the Contractor's expense.

3.2 FINAL CLEANING

- A. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances. Remove temporary structures of any kind from the site.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - g. Remove labels that are not permanent.
 - h. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

King County International Airport – Recabling Taxiway Alpha Lighting System Closeout Procedures

- 1) Do not paint over “UL” and similar labels, including mechanical and electrical nameplates.
- i. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
- j. Replace parts subject to unusual operating conditions.
- k. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
- l. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.

3.2 SCHEDULE OF CONTRACT CLOSEOUT PROCEDURES

The following closeout Procedures Checklist gives the order and responsibility for the requirements of the Final Contract Closeout. This list may not include all items required by the General Terms and Conditions and other Specification Sections.

Responsibility	#	Procedure	Date
Contractor	1.	Notify Owner that the Work is Substantially Complete.	_____
Owner	2.	Inspect the Work, prepare Punchlist and issue Certificate of Substantial Completion.	_____
Contractor	3.	Notify the Owner that Punchlist items have been completed.	_____
Owner	4.	Verify that Punchlist items have been completed.	_____
Contractor	5.	Prepare the Final Application for Payment that includes the following:	_____
	a.	Affidavit of Wages Paid for Contractor and all Subcontractors.	_____
	b.	Release of Liens Certificate from all Subcontractors.	_____
	c.	Project Record Documents.	_____
	d.	Operation and Maintenance Manuals/Video.	_____
	e.	Warranties.	_____
	f.	Permit approvals and Certificate of Occupancy.	_____
	g.	Stamped permit set of documents.	_____
	h.	Final Affidavit of Amounts Paid to Subcontractors.	_____
	i.	Certificate of Compliance.	_____
	j.	Reports for compliance with KCC 12.16.	_____
Owner	6.	Issue Notice of Completion and Final Acceptance.	_____

**King County International Airport – Recabling Taxiway Alpha Lighting System
Closeout Procedures**

Responsibility	#	Procedure	Date
Owner	7.	Prepare Notice of Completion of Public Works Contract and Send to Sate Department of Revenue with copy to Employment Security Office and Labor and Industries.	
Owner	8.	Receive the following from the State: a. Certificate of Payment of State Excise Taxes (Dept. of Revenue). b. Certificate of Payment of Contributions and Interest (Employment Security). c. Letter from State Department of Labor and Industries (Contract Compliance Unit).	
Owner	9.	Initiate Lien Search 45 days after date of Final Acceptance. a. Receive Lien Search results from Records.	
Owner	10.	Process release of retainage when all state releases are received and liens are cleared.	

Contact Agencies:**Insurance Release:**

Washington State Department
of Labor and Industries
Contract Compliance Unit
Post Office Box 44152
Olympia, WA 98504-4152
(360) 956-4762

Affidavit of Wages Paid:

Washington State Department
of Labor and Industries
ESAC/Prevailing Wage
Post Office Box 44540
Olympia, WA 98504-4540
(360) 753-4019

END OF SECTION

**King County International Airport Recabling Taxiway Alpha Lighting System
Installation of Underground Cable for Airports****INSTALLATION OF UNDERGROUND CABLE****1.1 GENERAL**

This item shall consist of furnishing and installing underground cable in accordance with these specifications at the locations shown in the plans. This item shall include the removal and disposal of the existing cable, and installation of new cable in the existing duct or conduit. It shall include splicing, cable marking, and testing of the installation and all incidentals necessary to place the cable in operating condition as a completed unit. This item shall not include the installation of the duct or conduit.

1.2 EQUIPMENT AND MATERIALS

- A. Airport lighting equipment and materials must comply with the Advisory Circulars listed in the Federal Aviation Administration (FAA) Advisory Circular 150/5345-53B.
- B. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification, when requested by the Project Representative.
- C. CABLE. All underground cable, transformers, and field splice kits will be provided by the Airport.
- D. CABLE CONNECTIONS. In-line connections of underground primary cables shall be of the type called for in the plans, and shall be one of the types listed below.
 - 1. The Field Attached Plug-in Splice. Figure 3 of AC 150/5345-26, Specification for L-823 Plug and Receptacle, Cable Connectors, employing connector kits, to a single conductor cable.
 - 2. The Factory Molded Plug-in Splice. Specification for L-823 Connectors, Factory Molded to Individual Conductors, are approved.

1.3 CONSTRUCTION METHODS

- A. The Contractor shall install the provided cable at the locations indicated in the attached plans. The taxiway lighting system will be de-energized at the beginning of each work day and must be fully functional at the end of the normal working hours, typically 4:30 pm. All field splices must be at the light cans. The Contractor shall be responsible for splicing the continuous lengths for home runs or other long cable runs. The home-run shall be spliced only at the beginning of each day with the previously installed cable and at the end of each day with the existing cable, or as directed by the Project Representative. The Contractor shall make no connections, splices or joints of any kind of any cables within the conduits or ducts

**King County International Airport Recabling Taxiway Alpha Lighting System
Installation of Underground Cable for Airports**

- B. The maximum number and voltage ratings of cables installed in each single duct or conduit, and the current carrying capacity of each cable shall be in accordance with the latest National Electric Code, or the code of the local agency having jurisdiction.
- C. The Contractor shall make sure that the light cans, junction boxes and ducts are open, continuous, and clear of debris before installing cable. Any required time used to clear the cans, boxes or ducts shall not be considered unanticipated or considered the basis of a delay. The cable shall be installed in a manner to prevent harmful stretching of the conductor, injury to the insulation, or damage to the outer protective covering. The ends of all cables shall be sealed with moisture seal tape before pulling into the conduit and it shall be left sealed until connections are made. Where more than one cable is to be installed in a duct, all cable shall be pulled in the duct at the same time. The pulling of a cable through ducts or conduits may be accomplished by handwinch or power winch with the use of cable grips or pulling eyes. Pulling tensions should be governed by recommended standard practices for straight pulls or bends. A lubricant recommended for the type of cable being installed shall be used where pulling lubricant is required. Duct or conduit markers temporarily removed for excavations shall be replaced as required.
- D. The taxiway lights and guidance signs shall be removed so as to not damage the existing fixtures. All taxiway lights will need to be removed to provide access to the ducts, field spicing and for the installation of the transformers. All guidance signs will need to be removed to replace the transformer or to connect the transformer located in the external can.
- E. Connections of the type shown in the plans shall be made by experienced personnel regularly engaged in this type of work and shall be made as follows:
 - 1. Field Attached Plug-in Splices. These shall be assembled in strict accordance with manufacturer's instructions. These splices shall be made by plugging directly into mating connectors. In all cases the joint where the plug in connectors come together shall be wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1 1/2 inches (37 mm) on each side of the joint. Field splice of cable to the L823 connectors shall be made according to the manufactures instructions. The Airport will provide each splicing kit. Each splice must be wrapped using a heat shrinkable sleeve that will be provided by the Airport. The heat shrinkable sleeves must be installed according to the manufactures instructions.
 - 2. Factory Molded Plug-in Splices. These shall be made by plugging directly into mating connectors. In all cases, the joint where the connectors come together shall be wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1 1/2 inches (37 mm) on each side of the joint.

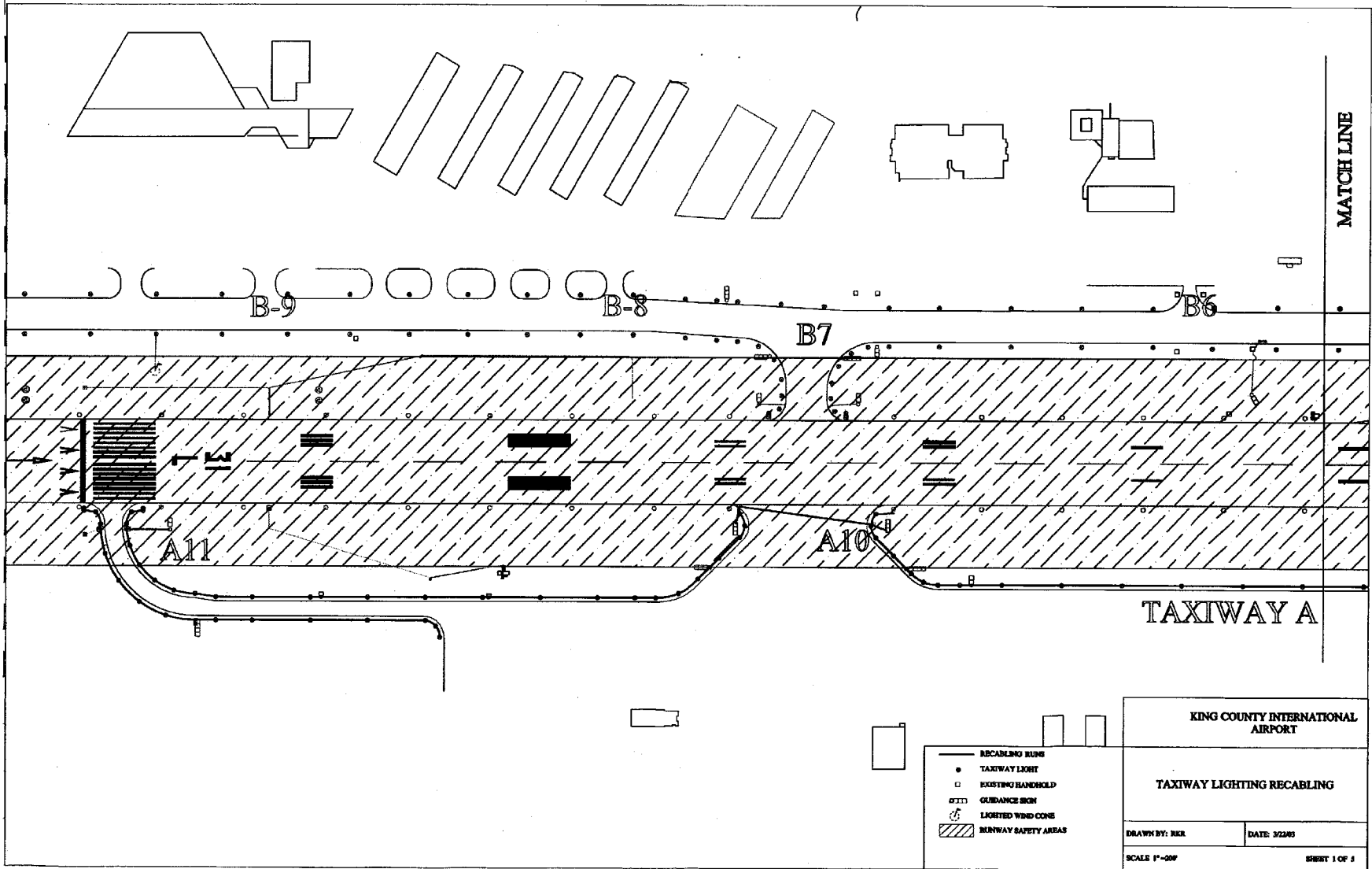
**King County International Airport Recabling Taxiway Alpha Lighting System
Installation of Underground Cable for Airports****1.4 TESTING.**

- A. The Contractor shall furnish all necessary equipment and appliances for testing the underground cable circuits after installation. The Contractor shall test and demonstrate to the satisfaction of the Project Representative the following:
1. That all lighting power and control circuits are continuous and free from short circuits.
 2. That all circuits are free from unspecified grounds.
 3. That the insulation resistance to ground of all nongrounded series circuits is not less than 50 megohms.
 4. That the insulation resistance to ground of all nongrounded conductors of multiple circuits is not less than 50 megohms.
 5. That all circuits are properly connected in accordance with applicable wiring diagrams.
 6. That all circuits are operable. Tests shall be conducted that include operating each control not less than 5 times and the continuous operation of each lighting and power circuit for not less than 1/2 hour.

MATERIAL REQUIREMENTS

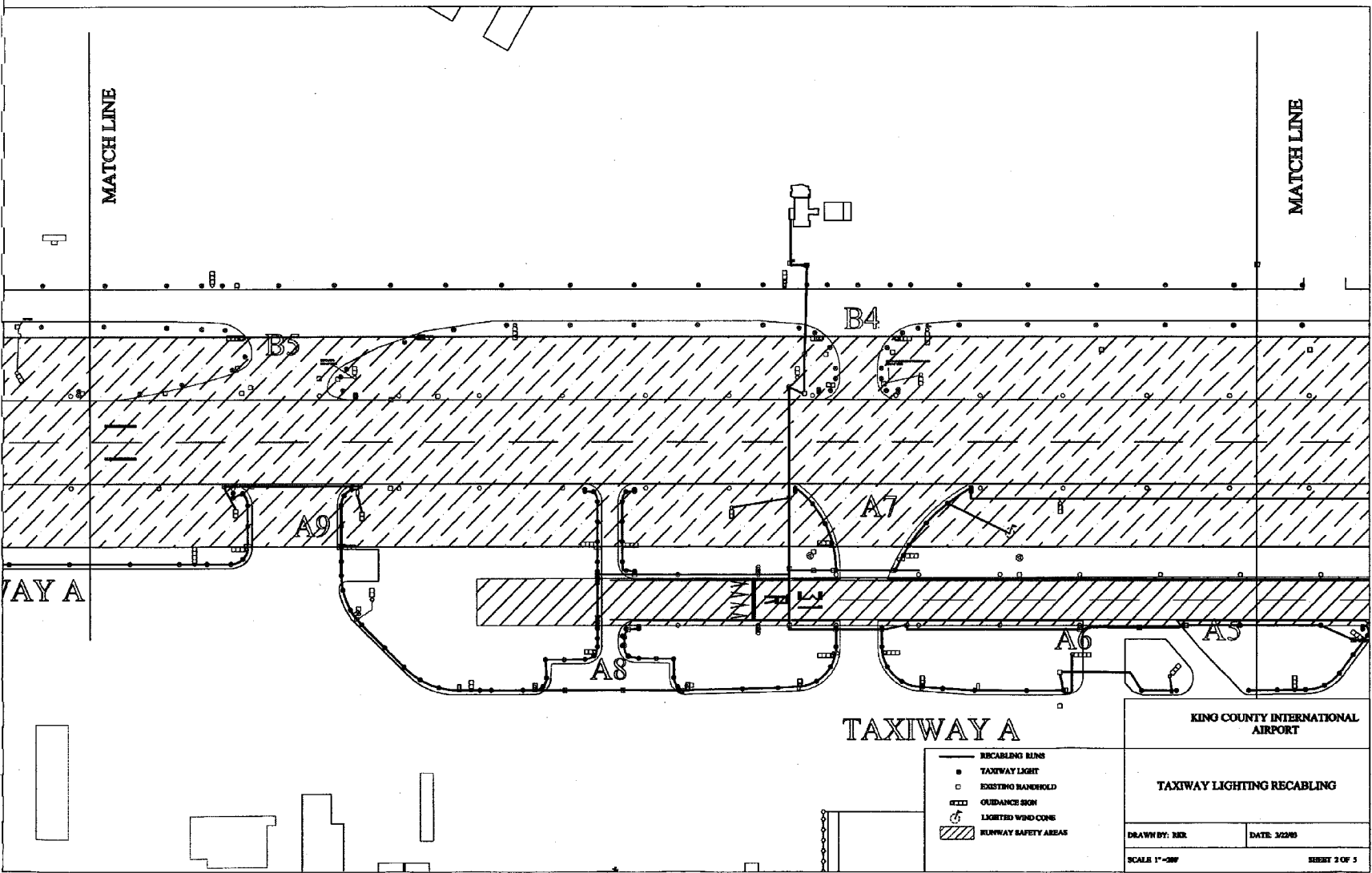
AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26	Specification for L-823 Plug and Receptacle Cable Connectors
Fed. Spec. J-C-30	Cable and Wire, Electrical Power, Fixed Installation
HH-I-595	Insulation Tape, Electrical, Pressure Sensitive Adhesive, Plastic, for Low Temperature Application
ASTM B 3	Soft or Annealed Copper Wire
ASTM B 8	Concentric-Lay-Stranded Copper Conductor, Hard, Medium Hard, or Soft
MIL-I-3825	Insulation Tape, Electrical, Self-Fusing, For Use in Electronics, Communications, and Allied Equipment
MIL-I-7798	Insulation Tape, Electrical, Pressure Sensitive Adhesive, Plastic

END OF SECTION



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KING COUNTY INTERNATIONAL AIRPORT	
TAXIWAY LIGHTING RECARBING	
DRAWN BY: RER	DATE: 3/22/89
SCALE: 1"=50'	SHEET 3 OF 5

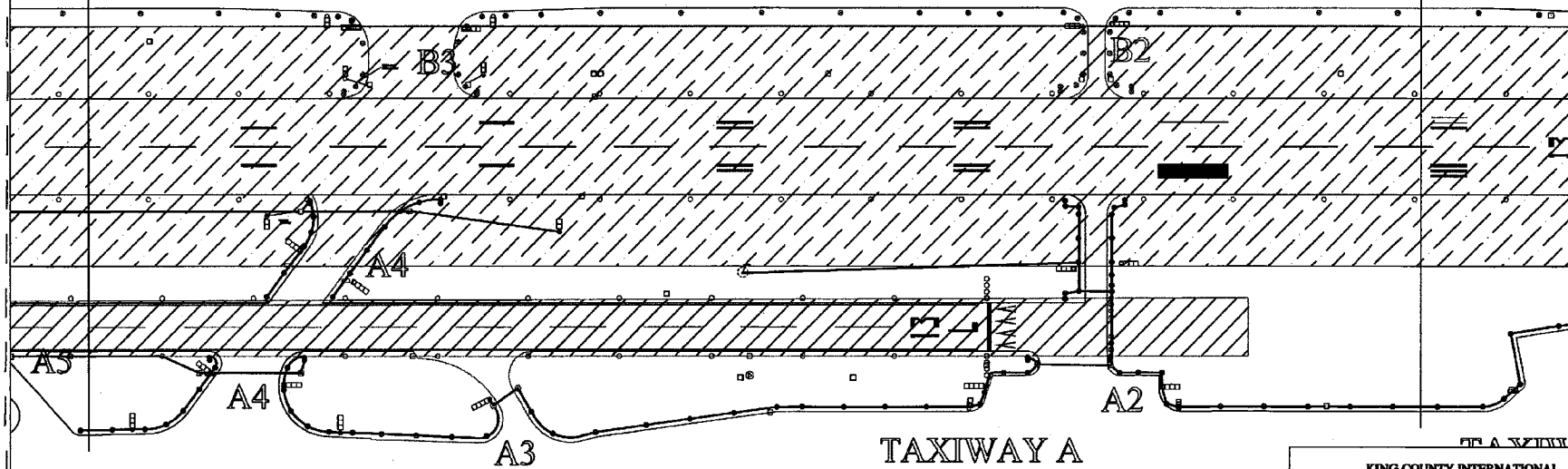
KOSlip4 36272

SEA402817

MATCH LINE

MATCH LINE

TAXIWAY B



TAXIWAY A

PLAN VIEW

KING COUNTY INTERNATIONAL
AIRPORT

TAXIWAY LIGHTING RECABLING

DRAWN BY: RCR

DATE: 3/22/03

SCALE: 1"=100'

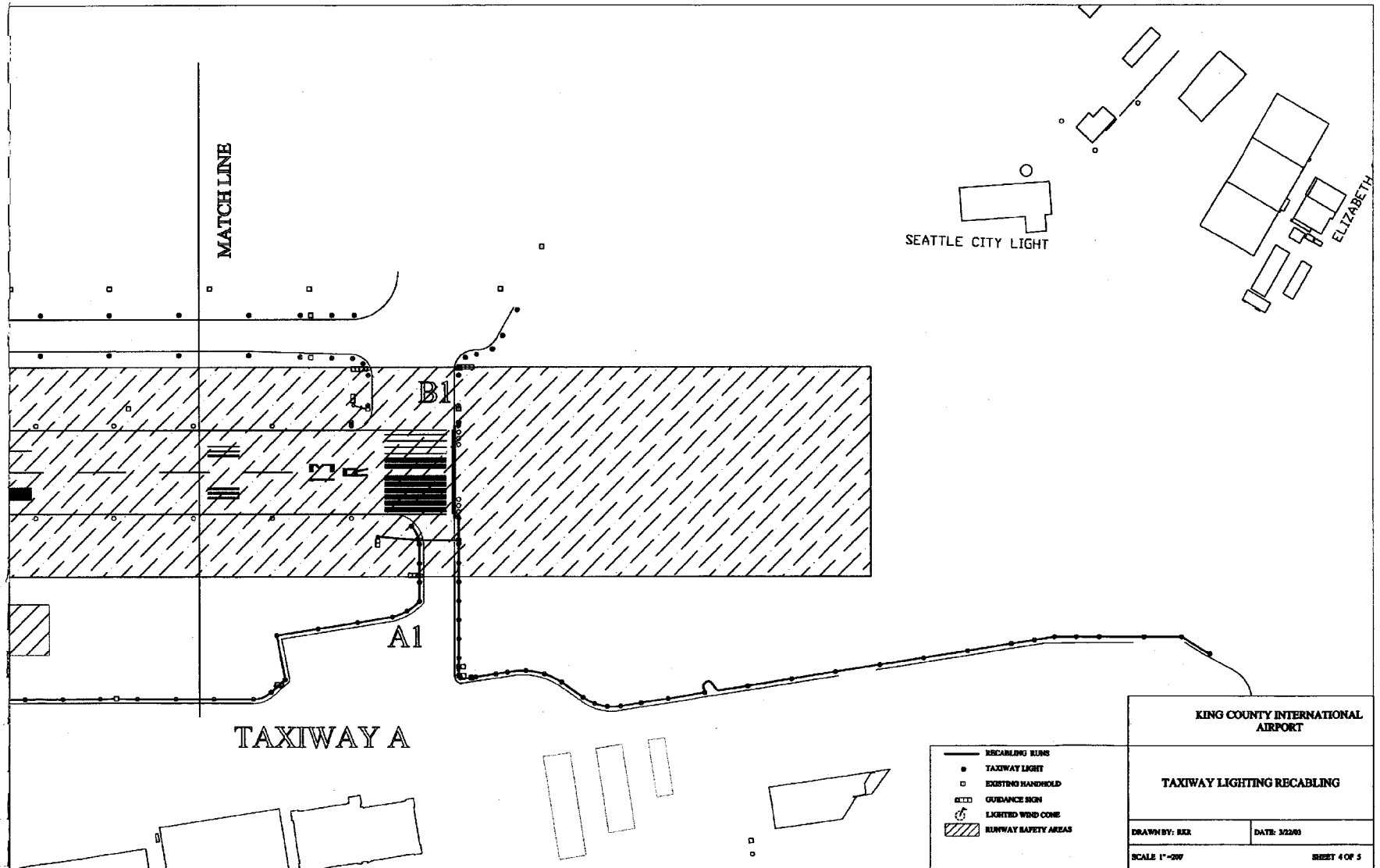
SHEET 3 OF 3

- RECABLING RUNS
- TAXIWAY LIGHT
- EXISTING HANDHOLD
- GUIDANCE SIGN
- LIGHTED WIND CONE
- /// RUNWAY SAFETY AREAS

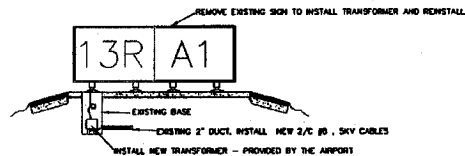
KCSilip4 36273

SEA402818

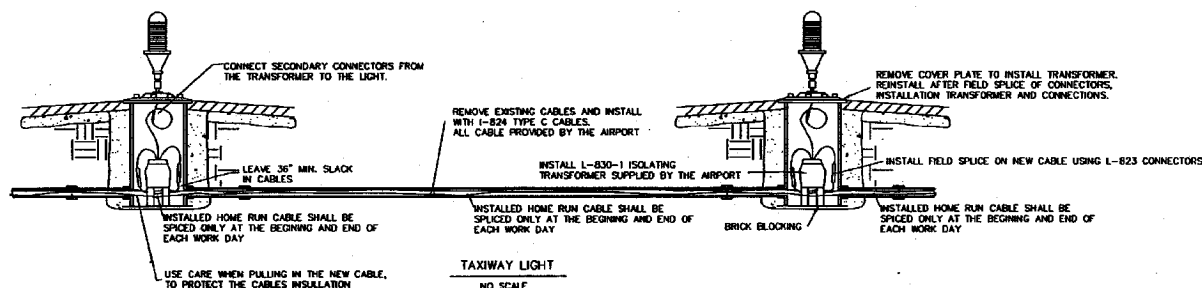
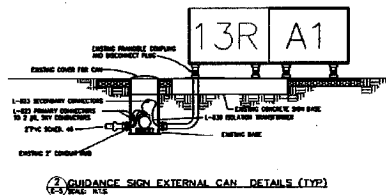
KOSI/p4 36274



SEA402819



GUIDANCE SIGN - TYPICAL



NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL THE SAFETY PROVISIONS OUTLINED IN THE SPECIFICATIONS.
2. SOME OF THE WORK REQUIRED IN THIS PROJECT IS LOCATED WITHIN THE RUNWAY SAFETY AREA (RSA) DENOTED BY THE HOLD LINES WHICH ARE 250' FROM THE CENTERLINE OF RUNWAY 13R-31L AND 60' FROM THE CENTERLINE OF RUNWAY 13L-31R. THE CONTRACTOR SHALL KEEP HIS EQUIPMENT AND PERSONNEL OUTSIDE THE RSA UNLESS THE RUNWAY ADJACENT TO THE WORK IS CLOSED. SOME OF THE WORK WILL REQUIRE WORKING ON WEEKENDS OR OUTSIDE OF NORMAL WORK HOURS TO MINIMIZE INTERUPTIONS TO RUNWAY OPERATIONS. THE CONTRACTOR SHALL PLAN THE WORK TO MINIMIZE THE TIME TO PERFORM THE WORK WITHIN THE RSA.
3. NOTICE TO AIRMEN (NOTAMS) WILL BE ISSUED BY THE AIRPORT TO CLOSE THE REQUIRED PORTIONS OF THE RUNWAYS AS NEEDED TO DO THE WORK. THE AIRPORT CREWS WILL INSTALL TEMPORARY CLOSURE MARKINGS ON THE RUNWAYS AS NEEDED.
4. THE AIRPORT WILL PROVIDE ALL REQUIRED CABLE, SPICE KITS, CONNECTORS AND TRANSFORMERS. ALL OTHER MATERIALS MUST BE PROVIDED BY THE CONTRACTOR.
5. THE CONTRACTOR MUST PROVIDE THE PROPOSED WORK SCHEDULE FOR THE NEXT WEEK NO LATER THAN WEDNESDAY OF THE PRECEDING WEEK TO THE PROJECT REPRESENTATIVE.
6. FIELD SPLICING OF CONNECTORS SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. EACH FIELD SPICE MUST BE COVERED WITH A HEAT SHRINK SHIELD. THE AIRPORT WILL PROVIDE THE HEAT SHIELD KITS.
7. THE CABLE MUST BE CAREFULLY FED INTO EACH JUNCTION SO AS TO NOT DAMAGE THE CABLE INSULATION.

KING COUNTY INTERNATIONAL
AIRPORT

TAXIWAY LIGHTING RECABLING

DRAWN BY: RKR

DATE: 3/22/03

SCALE: NTS

SHEET 5 OF 5

KCSlip4 36275

SEA402820